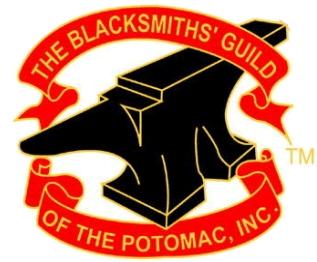


the Newsletter



of The Blacksmiths' Guild of the Potomac, Inc.



Rose by Paul Hollis, made for his daughter's wedding

Sep / Oct 2009

Vol. XXXI No. 5

An affiliate of ABANA: Artist-Blacksmith's Association of North America

The Blacksmiths' Guild of the Potomac, Inc.

2009 Officers & Board of Directors

President	Board Members
*George Anderton (2009) 989 S. Sleepy Creek Rd. Cross Junction VA 22625 540-888-3908 gtadma@hughes.net	Keith Kuck (2010) 5310 Nutting Dr. Springfield, Va. 22151 703-321-8109
Vice President (and Shop Master)	Pat McGuire (2011) 1102 Shannon Pl Herndon VA 20170-3506 703-437-9034
*Phil Heath (2011) 4600s four Mile Run Dr Arlington VA 22204 703-671-3134	Jeff Symanski (2010) 6183 Carters Run Rd Marshall VA 20115-2027 540-341-3031
Treasurer	David Murphy (2009) 7910 Woodrow Pl Cabin John MD 20818- 1638 301-229-5794
*Fred (Hop) Long (2009) 5309 Bangor Drive Kensington MD 20895-1106 301-942-6177	Bill Wojcik (2010) 4116 Kingchase Lane The Plains VA 20198 540-253-5121
Secretary	
Mike Briskin (2011) 1556 N Bryan St Arlington VA 22201 703-524-2362 <i> Member of the Executive Committee</i>	

The Newsletter is mailed to members six times a year, Initial membership is \$35 or three years for \$75. Renewals are \$25 for one year or \$70 for three years. Membership applications and renewals may be sent to Katie Dunn, 531 Merlins Lane, Herndon, VA 20170. Check payable to BGOP.

ABANA affiliates may reprint portions that are not individually copyrighted, so long as credit is given to original source. Any other publication by prior arrangement with president of BGOP. The Blacksmiths' Guild of the Potomac, Inc, its officers, members, and editorial staff 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. Send articles to bgopnewsletter@gmail.com.

Committees & Assignments

10 Yr Plan	Dave Murphy, Chair.....	301-229-5794
Corporation.....	Fay LeCompte, Chair.....	540-743-1812
Scholarships.....	Fay LeCompte, Chair.....	540-743-1812
Demonstrations...	Jan Kochansky.....	301-432-7734
Meeting Raffle...	Dave Murphy	301-229-5794
Hotline.....	Charlie Perticari.....	301-982-9430
Library.....	Steve Crist.....	703-754-9678
Web Master	Dick Smith	301-807-0342
Membership and Newsletter Editor..	Katie Dunn.....	703-435-4254 email at BGOPnewsletter@gmail.com

Shop Rules And Etiquette

The Guild shop is available for use by members in good standing whenever the Nature Center park is open. The shop is locked, so call the shopmaster or a board member for access. Follow all safety rules. Record the number of visitors on the log sheet near door.

Please observe the following rules and etiquette:

- ◆ Two people must be present in the forge to work.
- ◆ Bring safety glasses and wear them. Work in a safe manner at all times.
- ◆ Clean the shop **before and after** you work.
- ◆ Empty firepots and dump ash gate after each use to minimize corrosion.
- ◆ Dump cold ashes in the ash dump outside, at the side of the shop.
- ◆ Place tools back in their proper places.
- ◆ Dress bar ends which you have cut, to be ready for the next user.
- ◆ Clean the shop before you leave, and carry out trash which you create.
- ◆ Always turn out the lights and lock up when leaving.
- ◆ Bring your own material for personal projects. Shop stock is for learning and practice.
- ◆ No alcoholic beverages on park property.
- ◆ No propane can be stored on the property.

Scholarship Applications

Scholarship applications are available on the web at www.bgop.org. Completed forms should be sent to: Fay LeCompte III, 1016A East Main Street, Luray, Va.

©2008 Blacksmiths' Guild of the Potomac, Inc., and as copyrighted by individual contributors.

CONTENTS

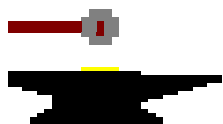
- 5- Modern Blacksmithing excerpt
- 6 - Web Links/ Upcoming Events
- 8— Making Scissors
- 12- JunkYard Steels
- 13— Library listing
- 18— Show and Tell
- 19- For Your Inspiration

Meeting Schedule

Oct 2	Rivet Decorating Tools
Oct 16	Decorating Rivet Heads
Oct 30	Board Meeting
Nov 6	Quick Demo Items
Nov 20	Cow Bells
Dec 4	Open Forge
Dec 5	Annual Dinner
Dec 18	Open Forge

CLASSES

Touchstone Center for Crafts, southwestern PA www.touchstonecrafts.com	Haystack Mountain School of Crafts, Maine www.haystack-mtn.org
Penland School of Crafts, northwestern NC www.penland.org	New England School of Metalwork, Maine www.newenglandschoolofmetalwork.com
John C. Campbell Folk School, southwestern NC www.folkschool.com	Bill Pieh Resource for Metalwork, Arizona http://www.horseshoes.com/supplies/alphabet/piehtoolco/linksandresources/workshops/billpiehworkshop.htm
Peters Valley, northwestern NJ www.pvcrafts.org	
Arrowmont School of Arts & Crafts, eastern Tennessee www.arrowmont.org	Yesteryear Forge, Amelia VA 23002 yesteryearschool@gmail.com or 434-390-6203 http://www.yesteryearschool.com



TIPS FROM OUR FORGE MASTER

If an odd detail seems out of place in your design,
think again

Presidents message

(This message is in response to "Chapter 5: The Age of Iron Tutankhamen's Tomb for the entire article see<http://mygeologypage.ucdavis.edu/cowen/~GEL115/115CH5.html>)

OK why is it that historians and archeologists never have to prove what they say is true? Instead many develop wild ideas that don't make sense when it comes to practical application. I have read this through and I think this article has some very interesting information in it. And I think it is very factual in nature. However, I am going to have to put my two cents in here because I have seen a problem here over and over again. The article is in my opinion not correct on one aspect of steel production. I do not believe that you can get steel by forging wrought iron. No matter how much you forge it

wrought iron is not going to gain enough carbon to make it steel. It might work except for one small problem. Scale. It is obvious the author has never taken hammer to metal in his life. When you forge wrought iron it scales a lot. More than steel. Try it and you will see. Any absorption of carbon into the top layer of the wrought iron will be immediately lost in the scale that forms.

You can force carbon into wrought iron if you want but it has to be done in an oxygen free environment. This is how blister steel was made for centuries. Wrought iron plates were put into a sealed box with intermittent layers of carbonaceous material and heated to high temps for long periods of time. Several days I think I read somewhere were needed to complete the process. The resulting material was called "blister Steel". This was because the carbon migration was not uniform but formed bumps on the surface of the iron. It is in effect a heavy form of case hardening. The resulting material still had to be reheated and welded into bars. And here is what the real story is all about.

By reheating and forge welding the plates into bars the thick layer of carbon in the plates was allowed to disperse to some extent through out the resulting bar. The more you folded and welded the bar the more uniform the carbon content. This in itself was not enough to make the carbon content uniform. It wasn't until some guy figured out how to take blister steel and melt it and then cast it into molds that truly uniform carbon content tool steel was available. (The first big use for cast steel was in the production of clock springs which had until that time been made from blister steel. These blister spring clocks were not reliable because of hard spots in the coil springs that would cause them to break with normal use. The new cast steel springs didn't break which allowed the production of wind up clocks that could keep time aboard ship which greatly improved navigation. It made the clock maker a lot of money.)

So you might ask what about those Japanese sword makers. Don't they get carbon to migrate into their steel? No they don't. What they do is add pieces of wrought iron, steel and cast iron in small pieces all in a pile which they forge weld into a lump. That lump is folded and welded several times, up to 16 times, to make a very large number of layers in that lump. I think that by doing all this folding and welding the layers of high carbon are so thin that the carbon will migrate from the high carbon layers to the lower carbon layers evening out the carbon content between layers. The carbon does not come into the steel from the charcoal fire. If any thing excess carbon goes the other way. They figured out how to take a pile of junk and make something useful out of it. If you look at the history of our craft I think you will see that that is what has been going on the whole time. But carbon into iron from the fire, no way.

If I am wrong please show me. I want to know.

George Anderton

One response to the previous message

By Jan Kochansky

It wasn't until the puddling process was worked out that wrought iron became a reliably low-carbon product. In a bloomery, depending on the ore/charcoal ratio, carbon content could vary, sometimes within the same bloom. You get soft bits and steely bits. There was a workshop a couple of years ago at Baltimore Knife and Sword, where the demonstrator made fairly decent steel in a bloomery, and at the BGCM days last May, the bloom was of varying carbon content on the basis of forging characteristics and, reportedly, spark tests. The same thing happens in the Japanese bloomery; the product bloom is broken up, and pieces of different carbon content are selected on the basis of fracture characteristics to be used in different parts of the sword.

You don't necessarily need to add carbon to wrought iron in order to get steel.

From MODERN BLACKSMITHING 1904

by J. G. HOLMSTROM

ONE of the chief reasons why the blacksmith is not so successful nor respected as before is his intemperance. The danger for the smith becoming a drunkard is greater than for any other mechanic. It is often the case that when a customer pays a bill the smith is requested to treat. This is a bad habit and quite a tax on the smith. Just think of it—fifteen cents a day spent for liquor, will, in twenty-five years, amount to \$9,000. Then add to this fifteen cents a day for cigars, which will, in twenty-five years, amount to \$9,000 at ten per cent compound interest. If these two items would be saved, it will give a man a farm worth \$18,000 in twenty-five years. How many smiths are there who ever think of this? I would advise every one to put aside just as much as he spends for liquor and tobacco; that is, when you buy cigars or tobacco for twenty-five cents put aside as much. When you buy liquor for one dollar put aside one dollar. Try this for one year and it will stimulate to continual effort in that direction. The best thing to do is to "swear off" at once, and if you must have it, take it out of business hours. Politely inform your friends that you must stop, or it will ruin you. If you drink with one you must drink with another, and the opportunity comes too often. When you have finished some difficult work you are to be treated; when you trust you are to be treated; when you accommodate one before another you are to be treated; when you order the stock from the traveling man you are to be treated. Some smiths keep a bottle in a corner to draw customers by; others tap a keg of beer every Saturday for the same purpose. No smith will ever gain anything by this bad practice. He will only get undesirable customers, and strictly temperance people will shun him for it. What he gains on one side he will lose on another. Besides this he will in the long run ruin himself physically and financially. Let the old smith quit and the apprentice never begin this dangerous habit. A smith that is drunk or half drunk cannot do his duty to his customers, and they know it, and prefer to patronize a sober smith.

WEB LINKS

- <http://www.bgop.org>
- <http://www.grizzly.com/workshopplanner.aspx>
- <http://www.Backyardmetalcasting.com>
- <http://www.1728.com> (math & geometry)
- <http://memory.loc.gov> (images at Library of Congress)
- <http://www.ironkisshammers.com>
- <http://home.earthlink.net/~bazillion/intro.html>
- <http://www.macefamilyblacksmithing.com>
- <http://www.watchman.dsl.pipex.com/filemaking/index.html>
- <http://www.random.org/sequences/>
- <http://en.wikipedia.org/wiki/blacksmith>
- <http://blog.wired.com/underwire/2008/08/math-strange-dr.html>
- <http://www.metalsmith.org/pub/mtsmith/VO5.3/Hist-anvil.htm>
- http://www.blksmith.com/How_%20to_%20Index.htm NEW
- <http://gilderspaste.com> NEW

UPCOMING EVENTS

Oct 10 from 1-5pm Pioneer Day-Gulf Branch Nature Center 1-5pm arrive early to set up for demo– note that parking lot is closed. No rain date call 703-228-3403 after 8 am for a recorded message about cancellation.

Oct 10, 10-4:30 Festival of the Building Arts National Building Museum in celebration of our built environment. Interactive fun for all ages.
<http://www.nbm.org/families-kids/festivals/foba.html>

Oct 10-11 Page County Heritage Festival in Luray VA. Local crafters, food, steam and gas small engine show <http://luraypage.com/heritage/>

Oct 10-11 Southern Maryland Farm Life Festival, at the John K. Parlett Farm-Life Museum of Southern Maryland. Near New Market, MD **This is the last time this festival will be held**
www.farmlifefestival.com

Oct 10, 10-3 Cherry Hill Farm Day, Falls Church VA. Set up 9am under the roofed pavilion.

Oct 17 9-5pm Aldie Harvest Festival, an annual celebration featuring food, entertainment, vendors, crafts, bake sales, grinding and blacksmithing. Aldie is located on route 50 one mile west of route 15.
www.villageofaldie.com/harvestfest.htm

Nov 7-8 from 10-4 Blacksmith and Friends Christmas show. At the Agricultural Farm Park in 18400 Muncaster Rd, Derwood MD. Admission is Free Call 301-807-0342

Dec 5 BGOP Annual Holiday Party 5:30 setup 6PM dinner. Church of the Covenant 2666 Military Road Arlington VA

THE BLACKSMITHS' GUILD of the POTOMAC, Inc.

Announces

Spring Fling April 16, 17 & 18, 2010

Gates open 3pm Fri.

We again invite you to join us in a return to the traditional SPRING FLING, two and a half day event with demonstrations, tailgating and story telling. The Berryville, Va. Ruritan Fairgrounds gives us ample tailgating and camping space.

NOTE : THE FAIRGROUNDS CHARGES FOR RV'S OR CAMPERS. \$15.00 per HOOK-UP \$ 10.00 PARKING per night. THIS IS NEW ,WE DON'T LIKE IT BUT IT IS THEIR RULE.

The Demonstrators for SPRING FLING 2010 will be:

Tom Latané from Pepin, Wisconsin

Plus Master Smiths from COLONIAL WILLIAMSBURG

The contest for 2010 Spring Fling will be anything that will fit into an 8 5/8"x 11"x 5 7/8" (inside measure) box. It must be forged and signed by everyone that works on the project It may have one or many pieces.

This is a great place to see and visit with old friends and make new ones while enjoying a great weekend of blacksmithing and the VIRGINIA country air.

We will have the internet link to download your own registration package again this year.

This is for those that do not receive an invite by regular mail. This is a non-response item you just download and print, then mail in. Look forward to seeing you at the Spring Fling.

Gates Open Fri at 3pm

Berryville, Virginia is located 8mi. east of Winchester Va. on Va. Rt.7,
45 miles west of Tysons Corner, Virginia.

Making Scissors

By Mike Briskin

Here's my process for making scissors. Feel to free to improve on it is you see fit – I'm sure there's plenty of room! I'll try to describe the steps as clearly as I can, but before you start, find a pair or three of scissors and examine them closely. Most conventional scissors are pretty similar in form, even though they come in different shapes and sizes. There's not much point in trying to forge the cheap new scissors with flat stamped blades and plastic handles, so don't examine those.

I start with two pieces of steel. I've been using 4" pieces of coil spring stock about 5/8" in diameter, which makes a medium-size pair of scissors. That's what the dimensions in this article will be based on. For simplicity, I'll just describe the operations on one of the bars, but you should work both at the same time and keep them as similar as possible (like tongs, the two halves of scissors are identical, not mirror images).

The first step is to taper one end of the bar – this gets some of the heavy drawing out of the way before the more delicate operations. I start the taper at the middle of the bar, and bring the end down to about 1/4" square. Don't go much further than this or you may find that you don't have enough material at the tip of the blade.

I then start the handle by slot punching the other end. I use a punch about 3/4" wide and set it about 1/4" in from the end. Try to keep the punch centered in the bar, but this isn't especially critical. Once I have the slot punched, I forge the sides most of the way back in to make it easier to handle the piece later.

Next, turn the piece 90 degrees and fuller just below the slot. The fuller establishes the sloping shoulder at the top of the blade. The fuller I use is made from a piece of 9/16" diameter lug wrench; I guess that makes it a 9/32" fuller. Looking down on the piece before the first hit, the end of the slot should be about 1/8" beyond the body of the fuller. I drive the fuller in about half-way, leaving about 1/4" of material. This will become the shank at the bottom of the handle.

After this, I form the angled step at the base of the handle shank using half-facing blows over the far side of the anvil. To do this, I first mark 45 degree angle across the anvil face with a combination square and soap stone. To make right-handed scissors, the mark



should cross from near left to far right (you could make left handed scissors by using the opposite diagonal). I align the piece with this mark, with the punched slot and most of the fullered notch extending beyond the far side of the anvil, and the notch facing toward the anvil. I set the material down until about 3/16" or a little less remains at the base of the step. If you've done this right, the notch and the step should meet to form an inverted vee across what will be the top of the blade.

Next, I forge the blade to profile and thickness. I keep the thickness approximately constant from the step to the blade tip; the profile should start to taper maybe an inch below the notch, and form a point at the tip (unless you want round-nosed scissors). The inner side of the blade (the one with the step) needs to end up flat, so I work with that side against the anvil to avoid hammer marks. I do not bevel the blade at this point.

Now its time to turn back to the handle. I drift the slot to 1/2" and then 3/4", and then start working it over the horn to expand it further to form the handle. At the same time, you'll need to rotate that handle around the notch. This is a little difficult to explain, but if you look at a pair of scissors, you'll see that the handle extends to the side of the blade opposite the shoulder. At this stage in the process, though, the handle will be mostly on the side with the notch -- the wrong side. The best way I've found to address this is to slip the handle over the horn, and, holding the blade horizontal with tongs, hit the down on the shank with the cross peen. You'll probably have to do some tweaking to get the handle properly aligned.



Once the handle is drawn out and roughly aligned, I round up the cross section using the horn and the face of the hammer. Go gently here – it's easy to get cold shuts on the inside of the handle. It's okay to leave some file work for later. I then tap handle into final shape and alignment. In the end, the inside portion of the handle should align

with the center of the blade, but I leave the handle slightly toward the outside of the scissors at this point.

After this, I bevel the blade. The bevel goes on the same side of the blade as the handle is now on. On most scissors, the bevel ends in a little step a just below the pivot. It's hard to forge this little step without dinging up the flat side of the blade; I just get as close as I dare with the face of the hammer and file the step in later. Remember, they call them "shears" for a reason – you're not looking for a knife edge. I forge the cutting edge down to about half of the original thickness of the blade. The blade will curve into a banana; just turn it on edge and straighten it back up.

No matter how careful I am beveling, the bottom (inside) of the blade always seems to become convex. This is not what you want. I flip the blade over, set it on a block of wood, and carefully go down the center with my cross peen. Make sure you stay away from the edges. This forces the center down and makes the blade flat or a little concave. I then flip the blade back over and flatten it against the anvil. This is an important step, and I'll take two or three heats if necessary to get the blade as flat and straight as possible.

Once the forging's done, I anneal the blade. There are probably better ways, but I put it back in the forge, shut the forge down, and plug up the vents with a little kaowool. The softer you can get the blade the better, because this will make it easier to tweak it cold if you didn't get it quite straight.

Once the blade is cool, I go to a 60 grit belt on my grinder. I generally clean the step at the bottom of the handle a little with a file, then grind the shoulder on the opposite blade down to match. Once I have the joint meeting up properly, I clean up the blade profile, making sure the tips match with the blades closed. I grind the cutting edge to a 75 degree included angle. At this point, I also file in the little step at the top of the bevel, and then grind the length of the bevel smooth. I also clean up the handle as necessary – a half-round file works well inside the loop.

As I suggested before, if the scissors are going to work right, the inside of the blade needs to be perfectly flat (or slightly concave). I can't achieve this by grinding against the platen, and with a 5" contact wheel, my grinder isn't really suitable for hollow grinding. The only way I've found to make the scissors work right is to grind the blade lengthwise on the contact wheel, using the crown of the wheel to relieve the center a little (or at least compensate for my imprecision).

If I find a kink or twist in the blade as I grind, I correct that cold. You'll notice that, viewed on edge, most scissor blades curve slightly toward each other; I put this curve in after grinding. Usually just holding the handle, resting the tip on the workbench, and tapping on the center of the blade will do the trick.



Once the grinding's mostly done, I drill and tap for the pivot screw. I've been using 10-32 screws with slotted flat heads. Just don't get carried away with making the blades identical and drill clearance holes on both sides! With the screw in, I test the scissors on cloth. If the cloth doesn't shear cleanly, the inside of the blades almost certainly isn't flat. Back to the grinder.

Once I'm happy, I clamp the scissors in the vise with the screw still in, heat the shanks with a torch, and adjust the handles so they meet properly. (Remember, I left them slightly outside the center line before – this keeps them out of the way when fitting up the scissors.) I also like to run the torch around the rest of the handles to scale them back up where I filed and ground.

I then remove the screw and (when I remember) coat the inside threads with white-out to protect them. With that done I heat the blades individually and quench them in oil, then temper to straw or bronze over a hot block. I heat and quench the entire blade, mostly because I like the burned oil finish this leaves on the handle. I try to temper the handles back pretty soft, though.

After the heat treat, I go back over the blades with a 400 grit belt and test the scissors again, flattening the inside of the blades more if necessary. When everything's right, I adjust the screw to be just a little loose, grind the end flush (I use a small carbide burr to avoid grind marks on the surrounding metal), and center punch the end to spread and lock it. It's important to leave the screw a little loose because it tends to upset and tighten when you punch it. I try to spread it enough that it won't turn on its own, but not lock it so tight it can't be adjusted later.



JUNKYARD STEELS

The following list describes some potential types of steel used for common junkyard items. This information was compiled from several sources, Machinery's Handbook, Country

Blacksmith, Blacksmith's Journal and Carpenter Technology Corp.

Machinery's Handbook is an excellent source for heat treatment of these steels.

APPLICATION	Number	Letter
Agricultural steel	1080	
Axels	1040	
Ball Bearing Balls	52100	
Ball Bearing Races	52100	
Band Saw Blades		L-6
Bits, Router		M2
Bolts, anchor	1040	
Bolts, heat treated	2330	
Bolts, heavy duty	4815	
Brake Lever	1030	
Cams		A6, S7
Chisels		O2, O6, L6
Clutch disk	1070	
Clutch Springs	1060	
Coil Springs, auto	4063	
Coil Springs, truck	5160	
Cold-rolled steel	1070	
Connecting Rods	1040	
Crankshafts	1045	
Cutters, Bolt		S2, S7
Drifts		L6, S2, S7
Drills		M2
End Mills		M2
Fan Blades	1020	
Files		W-2
Gear shift levers	1030	
Gears, transmission	3115	
Hammers		L6
Harrow Disk	1080	

APPLICATION	Number	Letter
Hay Rake Teeth	1095	
Jackhammer Bits		S-5
Knives, machine		M2
Knives, woodworking		O2
Leaf Springs	1085, 5160	
Lock Washer	1060	
Mauls		L6, S2
Mower knives	1085	
Music Wire	1085	
Nail Sets		L6
Plow Beams	1070	
Plow Disk	1080	
Plow Shares	1080	
Pneumatic Tools		L6, A6, S7
Punches-Cold		A2, O2
Reamers		M2, O2, A2
Roller Bearings	4815	
Screw Drivers		L6, S2
Snap Rings	1060	
Spring Clips	1060	
Spring Steel, clock	1095	
Steering Arm Bolts	3130	
Steering Arms	4042	
Taps		M2, O2
Transmission Shafts	4140	
Tubing	1040	
Universal Joints	1145	
Valve Springs	1060	
Wrenches		L6, S2

Blacksmiths' Guild of the Potomac Library

One of the primary goals of the BGOP is to provide educational opportunities for its members. The Guild's library is a continuously expanding collection of printed material and video to help us meet that goal. Currently we have more than a hundred different titles on blacksmithing and other metal work as well as a collection of periodicals.

LIBRARY POLICY

Only BGOP members in good standing may borrow material from the library. Good standing means paid up dues, no outstanding library or guild shop infractions, and active participation in Guild functions, e.g. meetings, demonstrations, etc.

By borrowing material from the library, you agree to care for and return the items to the library. The borrower must replace items lost or damaged beyond normal wear. Please exercise care in the handling of library materials

Two items may be borrowed for 1 month (2 regular meetings). Items may be kept for another 2 weeks (1 more meeting) provided no other member has requested that material. You are responsible for checking with the librarian.

Request library items by their alphanumeric listing. The letters beside each item designates the form of the material. (e.g. B=Blacksmithing Book, M=Miscellaneous Book, P=Periodical, V=VHS and D=DVD).

The librarian will make every effort to bring requested material to the regularly scheduled BGOP meetings for distribution. Requests for material must be made by the Wednesday before a meeting .The librarian can be contacted by phone or email.

Steve Crist

Phone: 703.754.9678

Email: sdcris@verizon.net

BGOP ID	Title	Author
B090	The ABCs of Blacksmithing	Fridolin Wolf
B095	Agricultural Engineering in Development Advanced Blacksmithing:A Training Manual	J. B. Stokes
B097	Albert Pauley : Sculptural Adornment	Renwick Gallery
B098	Alfred Habermann - Blacksmith and Designer	Peter Elgass
B100	American Blacksmithing	Holstrom & Holford
B105	The American Hearth	Richard Barons/ Devers Card
B105.5	American Indian Tomahawks	Harold L. Peterson
B106	An Introduction to Ironwork	Marian Campbell
B107	Anvils in America	Richard A. Postman

BGOP ID	Title	Author
B107.2	The Anvil's Ring - 10th Anniversary Issue - Patternbook for Artsmiths	The Anvil's Ring
B107.3	Architectural Ironwork	Dona Z. Meilach
B107.4	The Armoire and His Craft - From the XIth to the XVIth Century	Charles Ffoulkes
B107.5	Art Deco Decorative Ironwork	Henri Clouzot
B107.6	Art Deco Ornamental Ironwork	Henri Martine
B107.8	Art Nouveau Decorative Ironwork	Theodore Menten
B108	Art from the Fire	(Kunst aus dem Feuer)Julius Hoffmann
B110	The Art of Blacksmithing	Alex Bealer
B112	The Art of Wrought Metalwork for House and Garden	(Schmiedekunst am Haus)Otto Schmirler
B113	The Artist Blacksmith - Design and Techniques	Peter Parkinson
B114	The Backyard Blacksmith	Lorelei Sims
B115	Basic Blacksmithing: A Training Manual	J. B. Stokes
B115.3	Basic Blacksmithing - An introduction to toolmaking. Companion of B118.3	David Harries and Bernard Heer
B115.5	Beautiful Iron - The Pursuit of Excellence	Francis Whitaker
B116.1	Best of the Hammer - Volume 1	Brian D. Flax
B116.2	Best of the Hammer - Volume 2	Brian D. Flax
B116.3	Best of the Hammer - Volume 3	Brian D. Flax
B116.4	Best of the Hammer - Volume 4	Brian D. Flax
B117	The Blacksmith & His Art	J.E. Hawley
B118	Blacksmithing for Beginners	D. James Morre
B118.3	The Blacksmithing Instructor's Guide Companion of B115.3	David Harries
B118.5	A Blacksmithing Primer	Randy McDaniel
B119	The Blacksmithing Study Guide	Bob Fredell, Pete Stanaitis and Friends
B120	The Blacksmiths Cookbook: Recipes in Iron	Francis Whitaker
B125	The Blacksmith's Craft	CoSira
B126	The Blacksmith's Craft : A Primer of Tools& Methods	Charles McRaven
B126	The Blacksmith's Craft : The Legacy of Francis Whitaker	George F. Dixon
B130	Blacksmiths' and Farriers' Tools at Shelburne Museum	H. R. Bradley Smith
B132	A Blackshith's & Hammerman's Emporium	Douglas Freund
B133	Blacksmith's Manual Illustrated	J. W. Lillico
B134	The Boone Blacksmithing Legacy	Don Plummer
B135	Catalog of Drawings for Wrought Ironwork	CoSira
B140	Catalog of Drawings for Wrought Ironwork Gates	CoSira
B143	Catching the Fire - Philip Simmons, Blacksmith	Mary E. Lyons
B145	Charleston Blacksmith: The Work of Philip Simmons	John Michael Vlach
B146	Collection of Articles from the Internet	Various Authors
B146.5	Colonial Wrought Iron - The Sorber Collection	Don Plummer
B146.7	The Contemporary Blacksmith	Dona Z. Meilach
B147	The Complete Modern Blacksmith	Alexander G. Weygers
B148	Country Blacksmithing	Charles McRaven
B150	Decorative Antique Ironwork	Henry Rene D'Allemagne
B151	Decorative Architectural Ironwork	Diana Stuart
B153	Decorative Hardware	Liz Gordon and Terri Hartman

BGOP ID	Title	Author
B155	Decorative Ironwork	CoSira
B157	Decorative Ironwork -	Victoria and Albert Museum- Marian Campbell
B157.5	Decorative Ironwork- Wrought Iron Latticework, Gates, & Railings	Margaret Baur-Heinhold
B157.7	Decorative & Sculptural Ironwork - Tools, Techniques & Inspiration	Dona Z. Meilach
B158	Designs and Products of the Forge II	C. Thatcher
B159	Dictionary of Metal Design (Deutsch-Englisch:English-German)	Ronald B. Wiles
B159.5	Direct Metal Sculpture	Dona Z. Meilach
B160	Drake's Modern Blacksmithing and Horseshoeing	J. G. Holmstrom
B165	Early American Ironware Cast & Wrought	Henry J. Kauffman
B170	Early American Wrought Iron	Albert H. Sonn
B170.5	Edgar Brandt: Master of Art Deco Ironwork	Joan Kahr
B171	Edge of the Anvil	Jack Andrews
B171.2	Elementary Wrought Iron	J. W. Bollinger
B171.5	Fireplace Accessories	Dona Z. Meilach
B171.7	Forged Architectural Metalwork	Peter Parkinson
B172	Foxfire V	Edited by Eliot Wigginton
B172.5	Gilbert Poillerat	Francois Baudot
B173	The Golden Age of Ironwork	Henry J. Magaziner and Robert D. Golding
B176	The Heat-Treatment of Steel	Edwin Gregory/Eric Simons
B178	Heat Treatment, Selection, and Application of Tool Steels	Bill Bryson
B180	Hooks, Rings & Other Things	Frank Barnes
B182	How to Make Knives	Richard W. Barney; Robert W. Loveless
B184	Intermediate Blacksmithing: A Training Manual	J. B. Stokes
B185	Iron Age : Carl Wyland, Craft Metalsmith from Cologne (1886-1972)	Barbara Maas
B186	Iron and Steel	Hugh P. Tiemann
B188	Iron Menagerie	Guild of Metalsmiths
B189	Ironwork: Dynamic Details	Dona Z. Meilach
B189.5	Ironwork Today : Inside & Out	Dona Z. Meilach
B190	The Italian Masters of Wrought Iron	Giuseppe Ciscato
B191	Little Giant Power Hammer	Richard R Kern
B191.5	Little Ugliers - Blacksmith Folding Knives - Pamphlet	Gene Chapmam
B191.7	Lives Shaped by Steel	Nancy B. Zastrow
B192	Metal Design (Metallgestaltung) Church Craft - Grilles Doors and Furniture	Klaus Pracht
B192.51	Metal Design International 1999	Peter Elgass
B192.52	Metal Design International 2000	Peter Elgass
B192.53	Metal Design International 2001	Peter Elgass
B192.54	Metal Design International 2002	Peter Elgass
B192.55	Metal Design International 2003	Peter Elgass
B192.56	Metal Design International 2004	Peter Elgass
B192.57	Metal Design International 2005	Peter Elgass
B192.58	Metal Design International 2006	Peter Elgass

BGOP ID	Title	Author
B193	Metal Designs From Technique to Form (Metallgestaltung)	Achim Kuhn
B195	Metals for Engineering Craftsmen	CoSira
B200	The Modern Blacksmith	Alexander Weygers
B205	New Edge of the Anvil	Jack Andrews
B206	New Lessons in Arc Welding	The Lincoln Electric Co.
B207	Ornamental Metal Work	I.C.S Staff
B208	Plain and Ornamental Forging	Ernst Schwarzkopf
B210	Practical Blacksmithing	M. T. Richardson
B215	Practical Blacksmithing and Metalworking	Percy Blandford
B218	Practical Projects for the Blacksmith	Ted Tucker
B220	Professional Smithing	Donald Streeter
B220.5	Rustic Iron Work	Georges Eudes
B221	Samuel Yellin - Metalworker	Jack Andrews
B222	Scissors	Massimiliano Mandel
B223	The Shaping of Steel	(Stahlgestaltung) Fritz Kuhn
B223.5	Stuart Hill - Metal Works	Klaus Pracht
B224	Tool Making for Woodworkers	Ray Larson
B224.5	Under a Spreading Chestnut Tree - Basic Blacksmithing	Charlie Sutton
B225	Welding Technology	Giachino/Weeks/Johnson
B230	The Work Methods and Tools of the Artist-Blacksmith	(Werk und Werkzeug des Kunstschmieds)Schmirler
B233	Wrought Iron	Fritz Kuhn
B234	Wrought Iron	Gabriele and Massimiliano Mandel
B235	Wrought Iron Designs	H Grove
B235.5	Wrought Iron for the City and Country Home	L. Rodighiero
B236	Wrought Ironwork	CoSira
B240	101 Metal Projects for the Novice Blacksmith	Al Cannella
M100	Art Metals	C. Vernon Seigner
M101	Articles on the History of America's Iron and Steel Industry	American Iron and Steel Institute
M103	Chasing - Ancient Metalworking Technique with Modern Applications	Marcia Lewis
M105	The Colonial Silversmith	Henry J. Kauffman
M110	The Complete Handbook of Centrifugal Casting	Philip Romanoff
M112	Forming Using Metal Characteristics: Fold Forming	Charles Lewton-Brain
M113	Fountains in Contemporary Architecture	Minor L. Bishop
M115	Foxfire 6	Eliot Wiggington
M120	Handmade Jewelry Techniques and Design	Alison Richards
M125	Lost Wax Investment Casting	C.W. Ammen
M130	Lost America	Arlington H. Mallery
M133	Metal Techniques for Craftsmen	Oppi Untracht
M134	The Metalsmith's Book of Boxes & Locketts	Tim McCreight
M134.3	Mokume Gane - A Comprehensive Study	Steve Midgett
M134.7	Moving Metal - The Art of Chasing and Repousse	Adolph Steines
M135	The Rediscovery of Lost America	Arlington Mallery/Mary Robert Harrison
M137	Repousse Metalwork - A scheme of Sheet Metalwork for Schools and Amateurs	A. C. Horth

BGOP ID	Title	Author
M140	Sulley: The Biography of a House	Robert Gamble
M145	Sundials - Their Theory and Construction	Albert E. Waugh
M150	Textile Techniques in Metal - For Jewelers, Textile Artists & Sculptors	Arline M. Fisch
	PERIODICALS	
M160	Whirligigs in Silhouette	Anders S. Lunde
AR100	The Anvil's Ring - First Five Years 1973-1978	Artist-Blacksmith Association of North America
AR105	The Anvil's Ring - Volume 5 - Winter 1996 through Spring 1999	Artist-Blacksmith Association of North America
AR106	The Anvil's Ring - Volume 6 - Summer 1999 through Summer 2001	Artist-Blacksmith Association of North America
AR107	The Anvil's Ring - Volume 7 - Fall 2001 through Summer 2004	Artist-Blacksmith Association of North America
AR108	The Anvil's Ring - Volume 8 - Fall 2004 through Summer 2007	Artist-Blacksmith Association of North America
P200	Blacksmith's Journal Volumes 1 & 2 August 1990 -July 1992	Jerry Hoffmann
P201	Blacksmith's Journal Volumes 3 & 4 August 1992 -July 1994	Jerry Hoffmann
P202	Blacksmith's Journal Volumes 5 & 6 August 1994- July 1996	Jerry Hoffmann
P203	Blacksmith's Journal Volumes 7 & 8 August 1996 -July 1998	Jerry Hoffmann
HB101	The Hammer's Blow - Volume 1 - 1993 through 1996	Artist-Blacksmith Association of North America
HB102	The Hammer's Blow - Volume 2 - 1997 through 1999	Artist-Blacksmith Association of North America
HB103	The Hammer's Blow - Volume 3 - 2000 through 2002	Artist-Blacksmith Association of North America
HB104	The Hammer's Blow - Volume 4 - 2003 through 2005	Artist-Blacksmith Association of North America
	VHS	
VHS100	ABANA Comes of Age	National Ornamental Metal Museum
VHS105	The Birth of a Silver Spoon	Dawn Kiilani Hoffman
VHS110	Blacksmith's Journal Techniques Volume 1	Jerry Hoffmann
VHS111	Blacksmith's Journal Techniques Volume 2	Jerry Hoffmann
VHS112	Blacksmith's Journal Techniques Volume 3	Jerry Hoffmann
VHS130	Tal Harris BGOP Spring Fling 1997	George Anderton
VHS155	Randy McDaniel Animal Heads and Tools BGOP Spring Fling 1997	George Anderton
VHS180	Peter Ross #1 & #2 Forging/Welding of Wrought Iron BGOP Spring Fling 1995	Mitchell Linden
VHS190	Clay Spencer #1, #2, & #3 Treadle Hammer Magic BGOP Spring Fling 1995	Mitchell Linden
VHS195	Dorothy Stiegler # 1 & #2 Forge Welding/Basket Weaving BGOP Spring Fling 1995	Mitchell Linden
	DVD	
DVD110	Blacksmith's Journal Techniques Volume 1	Jerry Hoffmann
DVD111	Blacksmith's Journal Techniques Volume 2	Jerry Hoffmann
DVD112	Blacksmith's Journal Techniques Volume 3	Jerry Hoffmann

Show and Tell



Fleur de Lis made by Phil Heath and the chisels he made to create them. Notice the chisels are each for a specific side



Curt Welch brought letter openers with double twisted handles and one with a woven handle. The handles were from election sign stock.

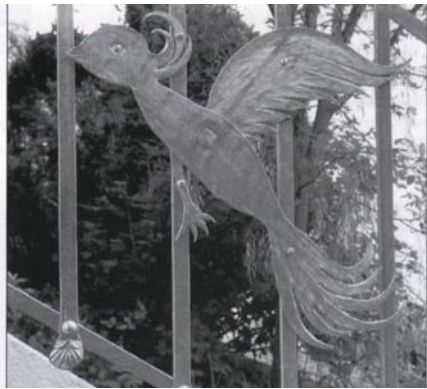


This is one of the two knives Wade Adkins brought, one was from a leaf spring, and one from a lawnmower blade.

Bugs by Connie , she made them during a Clay and Iron class up at touchstone



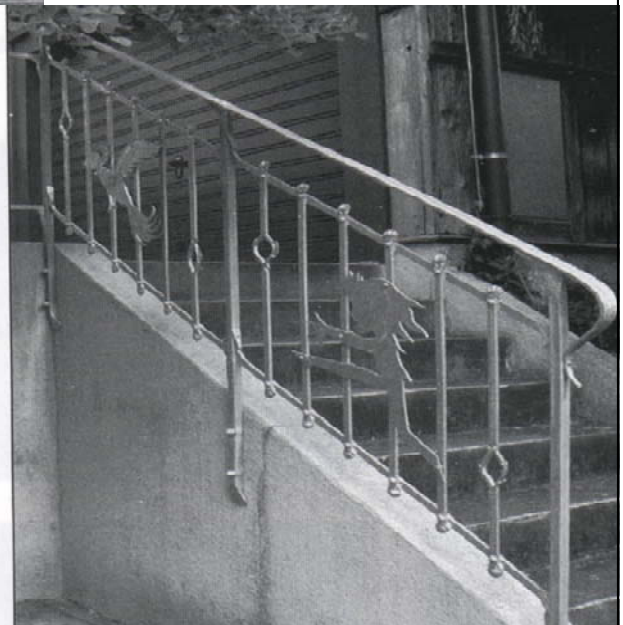
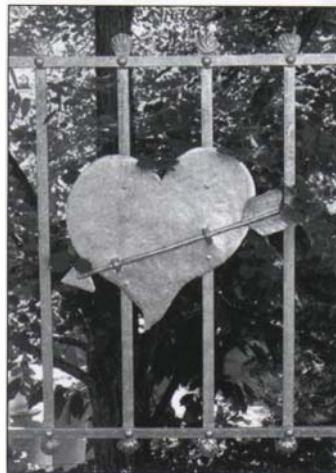
For Your Inspiration

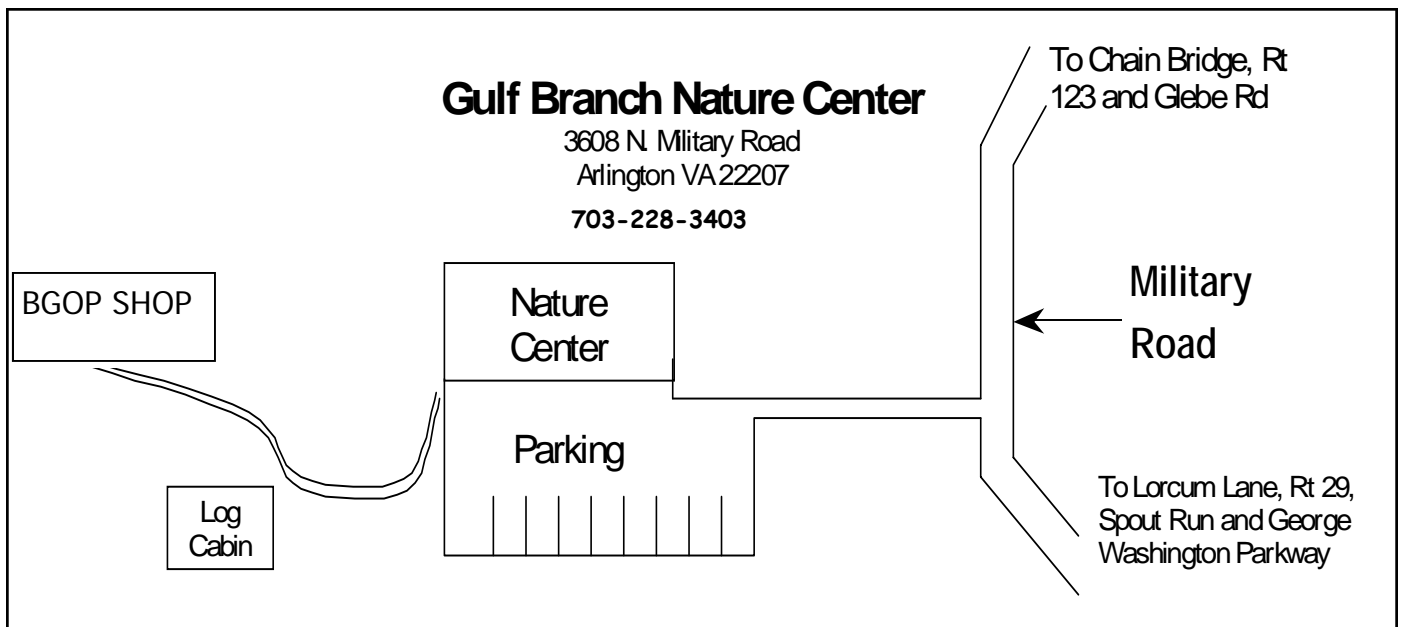


Railing created by American Artist blacksmith Brian Brazeal rendered on the imaginative drawings of Julia Steinbacher.

Taken from California Blacksmith September October 2005

Photos by Monika Scheimbauer





BGOP Meetings

Guild meetings are held on the first and third Fridays of each month at 7:30 P.M. at the Gulf Branch Nature Center, 3608 North Military Road, Arlington VA 22207. Meetings are usually held in the Guild's shop which is located about 50 yards past the Nature Center building on the wooded path. Occasional Friday meetings with a speaker or video are held in the Nature Center auditorium. Check the website at bgop.org or call the HOTLINE 703-527-0409 for updates on meetings and events.

The Blacksmiths' Guild of the Potomac, Inc.



c/o Katie Dunn
 531 Merlins Lane
 Herndon VA 20170

Address Correction Requested