

Hot Iron News

THE VOICE OF THE NORTHWEST BLACKSMITH ASSOCIATION

Second Quarter 2015





Northwest Blacksmith Association

"To promote and preserve the Art and Craft of Blacksmithing while building friendship and good will."

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Quick Reference for NWBA Members

Submit articles, photos, how-to's to HIN:
nwbainfo@gmail.com

NWBA Website: www.blacksmith.org

For NWBA correspondence or membership, or to change your address (must be in writing) send to:

Northwest Blacksmith Association
4742 42nd Ave SW #185
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Annual dues 2015: \$60 (foreign, \$70)

Dues include quarterly subscription to Hot Iron News.

Dues may also be paid online at

<http://blacksmith.org/membership-payment-gateway/>

Want to be sure to keep up to date?

Sign-up to receive email announcements monthly so you don't have to miss another event!

Sign-up online:

<http://blacksmith.org/sign-up-email-announcements/>

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ON THE COVER



Above: A completed bird forged for Fred Crist's sculpture (photo courtesy Dan Bowyer). The cover photo is a bird at a bright heat being forged into life.

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Upcoming Mentoring Center Events

June 27, 2015	Bob Denman of Red Pig Garden Tools
July 11, 2015	Wade Seiders, square poll belt axe with a coal forge.
August 8, 2015	Hardy Tool Making Work Party
Sept 12, 2015	Open Forge
Sept 26, 2015	Nitzan Lilie
Oct 9-11, 2015	Colonial Williamsburg Workshop, Jay Close, Colonial Hearth and kitchen ware
Oct 24, 2015	Open Forge
Nov 28, 2015	Andy Blakney Welding & Blacksmithing
Dec 12, 2015	Alair Wells, Powder Coating and Other Finishes

For most current info see our online events page:

<http://blacksmith.org/events/>

SAVE THE DATE!!

***Blacksmith Week
August 19th -23rd***

on Mt. Hood

***sponsored by
Cascadia Center for Arts
& Crafts***

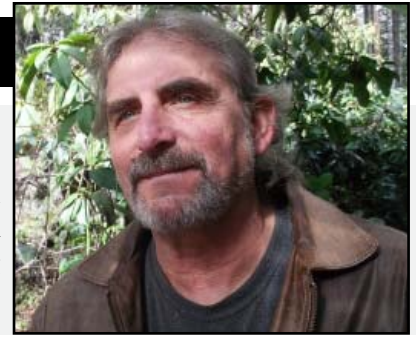
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From the Presidential Scrap Heap

Greetings all Blacksmiths:

I recently returned from the NWBA Spring Conference in Longview, WA. All in all it was a great time! Sounds like from the feedback I'm getting that everyone had a good time and learned something to take home. Thanks to all who had a hand in organizing and putting it on!



The Mentoring Center is going great guns. Rashelle Hams is doing a terrific job of organizing demos and has scheduled some days which will be just open forging all day. There will be a charge at the door to recover some of the cost of our propane, a full day of forging for only \$10.00, a real bargain. Check the website, www.blacksmith.org for the dates.

You may have noticed that the Library is now housed at the Mentoring Center. Feel free to peruse, checkout and return books there. I believe you can still checkout books and return through the mail. Contact Anne Bujold with questions.

We've received just a few completed surveys that we put on line and had available at the conference. It's important for your board members to know what you, the membership,

want out of this organization, so, it's not too late to fill out a survey. <http://blacksmith.org/nwba-member-survey-2015/>

Along the same line, several of your board members terms will be up in January. Think about yourself, or someone you know that you would want representing you on the board. We are looking for people who love the organization, have some thoughts and ideas on where they want to see it going, and aren't afraid to work a little bit. We will be creating a Nominating Committee at the July 11th board meeting. If you care, jump in!

We've recently road tested an idea for board members to participate in meetings via Skype or some other computer/Internet thing. Looks like it is going to work. This will allow someone to serve on the board without

having to travel long distances to attend meetings.

Mark your calendars for Blacksmith Week at Government Camp August 19th - 23rd. It's a great time of demos, hanging out with other blacksmiths, and the camping is free. Darryl Nelson and Cascadia Center for Arts & Crafts has done a great job of organizing and putting on this event. Don't miss it!

As summer is nearly upon us, we are working to have NWBA sponsored demos at some of the State Parks. All in the name of outreach and letting the world know that blacksmiths do still exist. If you are interested in participating as a demonstrator, contact Rashelle Hams.

Good forging,

Lynn



Richard Tinder

April 10th, 1942 – April 26th, 2015

It is with a heavy heart that we recently learned of Richard Tinder's passing. Richard had been serving on the board of the NWBA since January 2014 and had been a member for many years. He spent most of his working career as the Metal Shop Instructor at Hoquiam High School in 1982 where he taught his love of metal work until his retirement in June 2011. He had a gentle manner and a willingness to listen and learn. Richard will be missed by many of us in the NWBA.

To read the obituary for Richard:

<http://www.obitsforlife.com/obituary/1094890/Tinder-Richard.php>

There is information there about where to send notes of condolence to his family.



Richard teaching a hands-on class at NWBA Conference, May 2014

Treasurer's Report

NWBA Treasurer Scott Rash



NWBA 1st Quarter 2015

Income:

Dues Income	\$3,408.34
Conference Registrations	\$764.24
<u>Merchandise Sales</u>	<u>\$58.93</u>
Total:	\$4,231.51

Expenses:

Hot Iron News / Website	\$8,301.54
Bookshelves for Library	\$975.98
Al Bart Grant	\$850.00
<u>Administration:</u>	<u>\$669.74</u>
Total:	\$10,797.26

Mentoring Center 1st Quarter 2015

Income:

Workshop Fees	\$2,875.00
Microsoft Matching Gift	\$833.00
<u>Event Fees</u>	<u>\$684.00</u>
Total:	\$4,392.00

Expenses:

2015 Site Rental	\$4,800.00
Fly Press for Mentoring Center	\$2,100.00
Demonstrators	\$560.80
Steel	\$411.72
Propane	\$403.74
<u>Administration</u>	<u>\$34.00</u>
Total:	\$8,310.26

A Note from the Editor Amy Mook



NWBA is going strong, and with Mentoring Center events every month, and our conference, there is a lot to report on. I am grateful to have gotten help from our membership with photographs and articles. There are months when I am unable to make it to the Mentoring Center demo, and I rely on contributions for those months. Thanks so much.

The conference was exciting, two fantastic sculptures completed, and some of the best team work around. All three of our demonstrators, Frederic Crist, Dennis Dusek and Brett Moten, are dynamic, creative, and prolific. They also all have an easy going, friendly and open style, generous with their experience and knowledge. That combo makes for a great demonstrator. I hope that you had an opportunity to learn with these fine blacksmiths.

As usual, the conference activity was not limited to the demonstrations. There were four hands-on classes, hands-on repoussé, a slide show, a fine gallery and a lively auction. There was also quite a bit of hands-on instruction and active demonstrating going on in the tailgater area, where the atmosphere was informal and encouraging. The blacksmiths who had set up their forges and were showing their wares, eagerly shared their advice. Some jumped right in and gave impromptu hands-on lessons. That camaraderie and generosity with knowledge is something I admire about the NWBA. A huge thanks to the NWBA board for all the hard work beforehand and at the conference making it happen. Darryl Nelson made sure the demonstrators were well taken care of while they were with us. Many more pitched in to help make this conference a success. Thanks to all.

This issue covers three Mentoring Center events, the conference demonstrations, gallery and auction, and some blacksmith event announcements. Not wanting to wait until next issue, I jammed a thank you to our auctioneers and helpers into some open space on page 11, and a tiny coverage of the repoussé station run by Anne Bujold and Alair Wells. I am hoping that the abundance of pictures throughout will give over enough information, and that the captions for the photos will put them in context.

Due to the limited space (a good problem, no need to hunt for content!) I will include coverage of the hands-on classes, future Mentoring Center events, and Blacksmith Week, and shop tours, among other things, in the next issue. If you have submitted an article and don't see it in this issue, no worries, it will likely show up in the next one.

I don't really like to give unsolicited advice, but seriously, GO TO BLACKSMITH WEEK. You will not regret it. The lineup of blacksmith demonstrators is outstanding, the atmosphere there is total vacay, and it is cheaper than staying home! See page 27 for more info.

Happy summer! I hope to see you around at an NWBA event, ~Amy

NWBA Mentoring Center Monthly Hammer-In February 28th, 2015 Tool Making Workshop

By Lee Cordochorea

The chisels and punches in the NWBA tool library were, for the most part, lacking. There were a mere handful of these tools in usable condition. Many others were not. The situation was troublesome, worrisome, perhaps even downright irksome. A couple of them even seemed to volunteer as the "what your tools should not look like" poster children.



What your tools should not look like!

So what does a blacksmith association do when the tools need repairing, replacing, or augmenting? Same thing as a blacksmith, but as a group!

Our new Mentoring Center committee chair, Rashelle Hams, hit the ground running and led the way. The February Mentoring Center session began with Rashelle presenting straightforward and simple techniques for basic tooling. She wanted even beginners present to be tool-makers. And tool making they did!

A supply of AISI-4140 was on hand - 3/4" rounds cut to 7.5" lengths. Rashelle demonstrated the techniques, and then everyone pitched in to create the needed tools.

The techniques demonstrated may be used for small tools or for larger ones, and can be used cold on copper or silver sheet. Rashelle brought several tools she had previously made as examples.



Rashelle's example tools.

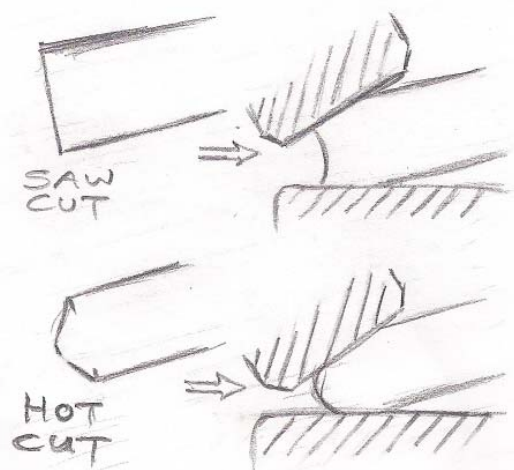
Rashelle said she usually prefers to hot-cut the stock from the bar, cutting to center. This sets up a pre-form for forging, and reduces or eliminates the cupping effect. (Drawing A) When hot-cutting round stock on a hardie, roll

the stock toward yourself a bit after each blow. This keys in the groove on the hardie edge and creates a smooth groove instead of a series of chops.

Sometimes it can be difficult to distinguish at a glance the profiles of a cold-work tool from a hot-work tool. Rashelle has a cold chisel and a thin fuller made some time ago which always give her pause - she has to check carefully to be sure which is which. Because of this, she now has a quick and easy way to distinguish between hot and cold tools. Hot tools have a hexagonal taper at the struck end. Cold-work tools have a struck end taper which is round. "Hex" means "hot."



Hex means hot. The hex end is a handy way to identify tools at a glance.

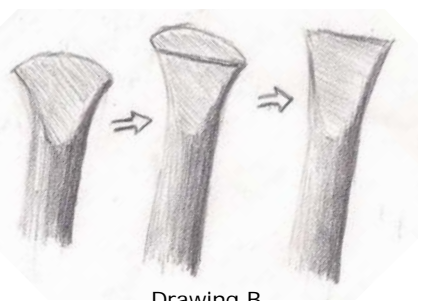


Drawing A

The hexagon is formed with three carefully placed hammer blows. The blows are given when the steel is not quite up to forging temperature - the indentations are more easily seen at the lower temperature. Hit once, roll 1/6 of the way & hit a second time. Roll 1/3 in the opposite direction and hit a third time. Check your work by looking down axially on the struck end. The facets can then be refined at heat.

After the taper (hex for hot-work, round for cold-work) has been made, a hot rasp is used. Any cupping is removed. A slight dome is created and surrounded by chamfer. The dome and chamfering slow down the "mushrooming" of the hand end, making the tool last longer before requiring dressing.

The working end is forged next. For chisels, butchers, or fullers, a two-sided taper is formed over the horn and trued up on the anvil face. End thickness is about 1/8" or 3/16". The curved profile is cut off straight with a hot-cut tool. (Drawing B) Next, the rag is removed via hot-rasping. Any additional forging is done at this time. Such could include a bevel for a butcher, dishing for a curved hot-cut, or any other needed shaping. Forge to rough, then finish with the hot-rasp.



Drawing B

Punches are made by forging a taper in the time-honored square-octagonal-round method. Stop at square, of course, for square punches. Again, we forge to rough shape and hot-rasp to finish. Center punches get a secondary bevel filed or ground on them.

The tool is ready to heat treat now. Rashelle does not bother with hardening of low-alloy steel if the tool will reach high temperature in use. "If it will glow, hardening is a no-go." Tools which will not get very hot do indeed receive hardening. All tools get normalized, regardless of end use.



Treatment for low-alloy steel begins with normalizing. This is simply a heat to lower color and then letting it cool slowly. The microscopic grain structure is made better this way, and stresses from forging are removed.

Have an old file and a strong magnet ready. Once the tool is cool, Rashelle puts the struck end into the fire. This will store heat for use when the tool is tempered after hardening. Once up to color,

the tool is turned 'round and the working end is heated. The working end is checked frequently with a magnet as it heats. The "transition temperature" of low-alloy steel with less than 0.70% carbon is just slightly above the temperature at which the steel loses magnetic attraction.

Quickly plunge the tool into water and swish it around. Quickly file off scale so the running of the temper colors may be viewed. Rashelle taught us gold is a good color for AISI 5160, but that AISI 4140 should not be quite as soft. Rashelle cautions these are the colors that work for her. If your tool ends up too soft or too hard, re-harden and adjust the tempering color to suit. There are color charts online, and even apps for smart phones to provide reference, or starting point when using different steels.

The 4140 is plunged back into the water at the appropriate color. Again, the tool is quickly removed and filed a second time; the tempering colors are erased. Once again, we watch the colors run (more slowly this time) until the working end shows the proper color. Quench a second time and file off the color again. The third draw takes long enough the tool may be shown around to folk. Quench again once the colors have run for the third time.

With heat treatment complete, the tool may be finished by filing and/or grinding.

The gang at the Mentoring Center made several tools this way following Rashelle's lead. Now we have a good selection of several hand tools for each workstation. Be sure to avail yourself of these tools during our next open-forge session!



Morgan Kirk hot-rasping to finish.



NWBA Conference 2015 Repoussé Station

The Repoussé Station was busy throughout the conference, with tap tap tapping singing on the breeze. Tucked away behind the building in a nice covered area, the work tables were abuzz with creativity. Copper repoussé is great for beginner projects. Like many crafts, it is not too hard to make something rudimentary, but remember, it takes quite a bit of practice and determination to get good at it.

Thanks to Alair Wells and Anne Bujold for their time and energy spent to introducing more people to the craft; setting up, taking down and instructing during the conference, it was no small feat.



NWBA Mentoring Center Monthly Hammer-In

March 28th, 2015 Mark Aspery

Photos by Dan Bower, text by Hardie Swage

Welded Collar*

Use a "V" block to wrap a collar around a bar

In this case the collar has 45 degree corners where the ends meet.

The bar has been upset where the collar will be welded, because the welding process will reduce the bar.

Making a solid "V" block can be difficult, consider forming one from angle iron.

There are three bends in the final collar forging, and extra material needs to be added for this.



*See Hammer's Blow Spring 2015 for an excellent article by Mark Aspery, fully detailed step by step instruction with excellent photographs.

Forge Welding

The pictures show a standard drop tong weld. The ends of the bars have been upset to give added material and a short scarf formed. A prime example of why tongs need to hold material both ways. Tip the bar in the upsetting stage to help form the taper on the end. Carpenters use long glue joints, blacksmiths use short welds.

The scarf is tapered and comes to a point. There is a slight step to the mating surfaces so the smith can "feel" when things are properly in place. The first heat is rapid light blows. Notice Mark also works the ends of the scarf to help set the points. The welded surfaces are well above the anvil face, so the heat will not be drawn from them too quickly.

Once the two pieces are "tacked" together: brush, reflux and take a full welding heat. Harder blows are used on the second heat and the bar is brought down to near parent stock size. A third heat finished the joint.



NWBA Mentoring Center Monthly Hammer-In

April 25th, 2015 Nitzan Lilie

Photos by Dan Bower

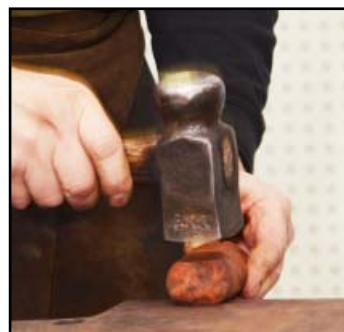


Nitzan brought an assortment of hinged and spring tools for use under the hammer and on the anvil.



Nitzan Lilie had a full demonstration, with at least a little something for everyone. He brought a wide array of his custom tools, and showed how he uses them. He also made a dragonfly and a pair of tongs, and generously lingered after his demo to answer any questions and help with hands on questions.

Nitzan stressed a few simple points: Whatever you are doing, the first things are: 1. Be comfortable when working, adjusting your tools to eliminate all discomfort. 2. Use plasticine (modeling clay) to work out how to forge something, it moves just like hot metal. He learned this from the masters in Czeck Republic. 3. Tooling is very important. It can look simple... nothing is simple.



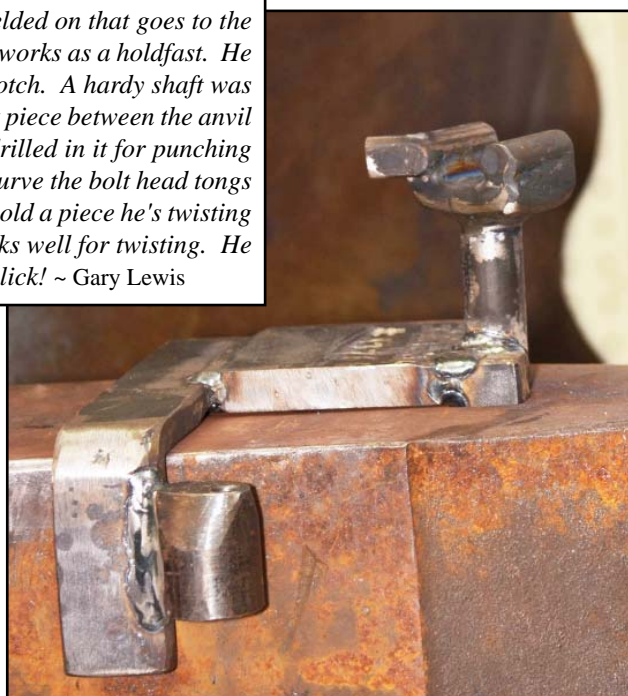
Plasticine (modeling clay) is a good tool for testing the affect of hammer blows.



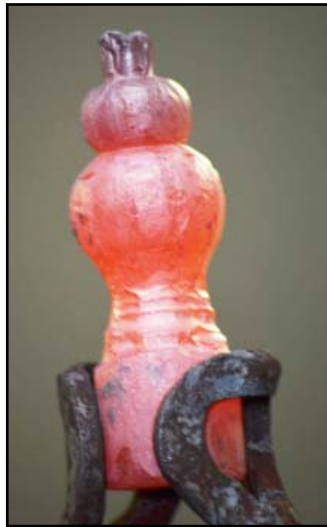
Nitzan makes and uses ergonomic handled chisels shaped just for his hand, the working end made out of rebar.

Having learned with master blacksmiths in Israel, Europe and the USA, there is a lot to be learned from his blacksmithing bag of tricks. Nitzan will be coming again in September to the NWBA Mentoring Center, and with more time to prepare for the demo, it should be an even better than the great demo we saw here. To learn more about Nitzan Lilie at his website: <http://www.nitzanlilieartistblacksmith.com/>

The tong making jig was a piece of thick flat plate with a long piece welded on that goes to the far side of the anvil, bends over it to hold the "pritchel" hole as the anvil. It works as a holdfast. He reiterated several times he didn't like to see people holding rods in their crotch. A hardy shaft was welded on. On the far side just below the anvil edge (when you place a work piece between the anvil and plate it rises up to the appropriate height is a thick piece with a hole drilled in it for punching the rivet hole. There's also an upright piece made for using as a saddle to curve the bolt head tongs and an angle bender. In the pic on the left below he is using the holdfast to hold a piece he's twisting cold, 1 1/2 x 1/4 I think. Other than lifting the legs off the floor a bit it works well for twisting. He dislikes walking to the vise when he can do something at the anvil. Pretty slick! ~ Gary Lewis



Nitzan Lilie: Forging a Dragonfly



Using one die under the hammer, create 2 balls on the end of a 3" x 1" piece.



Flatten part of the larger ball for the body, then draw out the tail. Use decorative blows on the tail and smush out the end as shown in the completed dragonfly below.



Drill hole for eyes. 1/4" rod for eyes. Start cold to start the smush of the eyeballs, then heat and complete the eye.



6 legs made from 3 pieces of stainless tig welded together. Drill hold thru body, leg piece, and wings to align them. Wings: precut in stainless, draw lines, then scribe with chisels under the power hammer.



3/16" hole is drilled through the body, wings, and legs, to attach wings and legs with 1 rivet.



Another view of a completed dragonfly

Thank you Nitzan for your great demonstration.

Save the Date!
Don't miss Nitzan Lilie at the Mentoring Center, Longview, WA in September 2015.

Al Bart Grant Recipients

by Lee Cordochorea, NWBA Secretary

In the first quarter of this year, we had three recipients of the Al Bart Grant.

Chandler Hatch of Tacoma, WA

Chandler was first exposed to the craft at Camp Hahobas. This summer, Chandler will be running the smithy area during camp, teaching the merit badge to the younger boys. This is the first time Hahobas has had an 18 year old running the smithy, but Chandler's mentors know he is up to the task. He made use of his grant to attend Mark Aspery's Level I National Curriculum at our Mentoring Center. His wish was to hone his skills prior to teaching others. His long term goals include becoming a well rounded smith, understanding the fundamentals, and implementing them successfully while teaching and creating objects.

Chandler will be paying his grant forward by teaching the basics of the craft to a good many scouts.

Travis Huisman of Sedro-Woolley, WA

Travis is a Scoutmaster for Boy Scout Troop 4070 in Sedro-Woolley, WA. Travis' grant helped him attend the Beginning Blacksmithing I class at Old West Forge in White Salmon, WA. He's adding blacksmith skills to his metalworking repertoire. Travis hopes to become an intermediate to advanced hobbyist with the intention of adding decorative metal work to metal/wood/leather furniture and decorative pieces. He really enjoys making someone smile when they see a project made just for them.

Scouts in Troop 4070 will be learning from Travis. He plans to report on their progress with an article and photographs in the Hot Iron News. This is how he will be paying forward.

Cori Whitlock of Sandy, OR

Cori was able to attend the Oaks Bottom Forge knife making class in Portland with her grant. She views smithcraft as skill that she will use long into the future, both for personal satisfaction and as a possible vocation. Cori acts as a demonstrator for her family's forge building business, and often receives questions from people watching about how they can get involved with blacksmithing. NWBA is the first source she suggests to them.

Cori will pay her grant forward by demonstrating knife making techniques whenever she is out with her family at an event. She says "Many people want to know how to make knives, so if that is something I am good at demonstrating, it should help attract new members to NWBA."

CONGRATULATIONS to our Al Bart grant recipients!

YOU should consider applying for the Al Bart grant! The grant provides up to \$300 towards the expense of any blacksmith instruction or workshops. Recipients can pay forward in several ways. One may write an article for the Hot Iron News or for one's local newspaper. Hands-on classes at conferences, or demonstrations at our regular Mentoring Center sessions are both good options. Demonstration before the general public of the skills learned is a great way to pay forward. Other options include slide shows, teaching in other organizations, creating a display table at the conference, or making an instructional video. Perhaps you have a new and unique idea for paying forward?

For more information, or to apply, please visit <http://blacksmith.org/al-bart-grant/>

Thank you NWBA Conference 2015 Auction Team!



Many thanks to the auctioneers at our conference, Eric Sprado and John Paul for bringing it and waking up our bidders!



Thanks to Andrea Lisch and Anne Bujold who kept the numbers, with runner assistance from Larry Langdon, Dave Lisch, and additional help from Jeff Wilson, and Lee Cordochorea. Thanks to all who are not named who also helped make the auction a great success.

NWBA Conference 2015

Demonstrator Frederic Crist



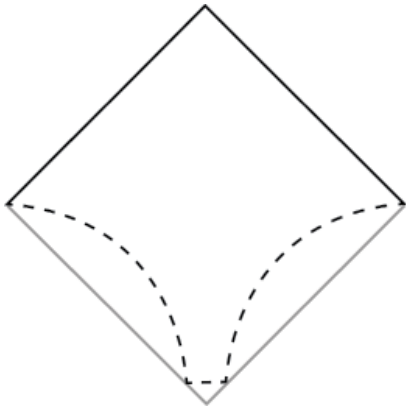
Truly a master of the craft, with a portfolio filled with decades of highly accomplished blacksmith projects to wow you, Frederic Crist is also a great experimenter. He is fascinated with the sculptural qualities of steel, and his curiosity is contagious. Development of intricate and aesthetic forms from uniform plates or bars of steel is one subject of his explorations. What he shared at his demonstration was along another vein; piecing together simple design elements with traditional forging techniques, and giving them life in surprising ways.

Fred's demonstration project was a large scale dynamic sculpture of three birds in flight, standing over eight feet tall. The pieces were simple; a square plate for the bird, a bar $\sim 1/4"$ x $\sim 1"$ x various lengths for the flight path, and $\sim 5/8$ in. x ~ 6 in. x ~ 4 ft. tall for the stand.

Hope you enjoy this pictorial article, not a step by step but a peek at the process.



Carved from a solid bar of steel (approx. dimension of parent stock $3/4"$ x $2"$ x $12"$). Fred isolated the faux collar area first, then cut and forged the rest of the parts directly out of the parent stock, this is all one piece from beginning to finished product.



The parent stock for the birds was hot cut to create the initial shape, and upset the tail end for forge welding later. Then a diagonal cross peen (one of Fred's favorite forging hammers) was used to upset and thicken the edge to form the head, neck and shoulder area.



Project mock-up, one bird in flight with flight path and base shortened.



Hot cutting the diagonal from the tip of the head to above the tail tab (for welding to flight path) to make the crease for the fold. The cut crease will open out, not fold in. Dennis Dusek is striking.



** Photos Courtesy Dan Bowyer



At the anvil: Folding the bird with the cut to the outside, forging on the body to form the belly and forge the head



Right, at the vise: spreading the wings, a little different for each bird, then rounding the curve of the wings over the horn of the anvil.



Fred, with assistance from Darryl Nelson, preparing the base pieces for welding to the flight path bar. Hot cut, then forge the tab curve over the horn and refine in the vise.



Fluxed and ready for welding.



Forge welding the birds to the flight path. Fred worked quickly and had three successful welds in a row. He had not had any practice forging welding using a gas forge until just the week before, but he made it look like it was the easiest thing in the world. His flux was easy weld with iron filings in it. He followed up the initial weld with more flux on the whole thing, heating and striking to complete the welding, and forge to shape.



Pieces prepped and stashed for the project completion the next day.



Above: Upsetting the end of the flight path to be forge welded to the base piece.

Left: Hot punching the holes for the bolts to be used in assembling the sculpture.



The flight paths curve perpendicularly to the tab on the base that they are welded to. To blend from one orientation to the other a slightly greater than 90° twist is put into flight path (90° is desired, the twist tends to unwind a bit when forging to blend it in) where the transition is desired, fairly close to the weld area, but not all the same for the three pieces.



Each flight path received a unique treatment, curving this way and that to give the effect of a scattering flock of birds. The pieces were heated by torch and gentle curves were formed with bending forks.



Left: Assembly fastening detail.

Below: Tweaking the flight paths until they created the desired effect.



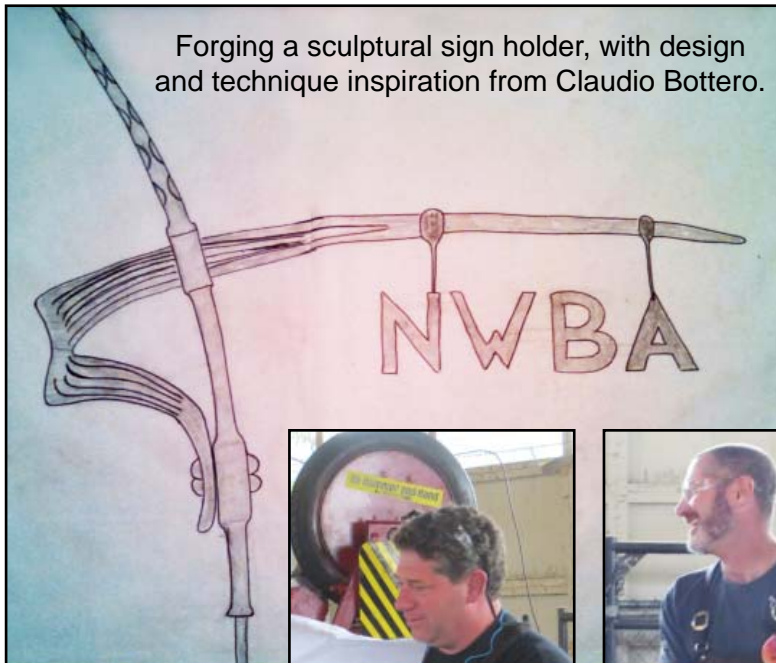
Final touches to the sculpture, fully assembled on the base...the photo does not do it justice. Come to our Mentoring Center in Longview, WA to see the real thing. Such a fine piece of art made in such a short time, and with so much grace and skill is truly amazing.

Thank you so much Fred, for the great demonstration and the gift of your beautiful creation.



NWBA Conference 2015

Demonstrators Dennis Dusek & Brett Moten, with assistance from Ben Czyhold



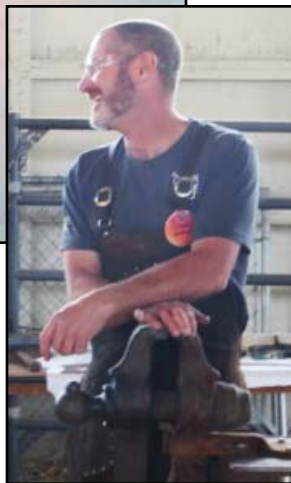
Dennis Dusek designed this classy NWBA sign with inspiration from the style and techniques of Claudio Bottero, whom both Dennis and Brett have studied under. The detailing and size of the pieces made this a very ambitious project to try and execute during the allotted demonstration time, teamwork was the key to completion. The teamwork was one of the most amazing features of the demonstration; two *very* skilled and independent blacksmiths collaborating with grace and intelligence, respect and finesse... it was truly beautiful, as is the finished piece.

Ben Czyhold rounded out the team by stepping in to forge the pieces needed to hang the letters. The original design (as in the picture left) did not specify the final incorporation of tongs to connect the letters. Ben forged the tongs and then forge welded them to the letters, which were made ahead of time.

The sign consists of two main pieces, plus the tongs and the letters. The vertical piece has two pass throughs, decorative forging of the top end, and has a graceful curve. The horizontal piece is deeply grooved and forged to great effect. The horizontal pierces through the upper vertical piece at the upper pass through and is decoratively riveted to it at the lower pass through. Working on two separate pieces kept the pace moving, there was always one in the fire and one being worked.



Dennis Dusek



Brett Moten

Dennis made a template of the horizontal piece, forged the letters and grooved the horizontal piece before the demonstration. Both Dennis and Brett worked with a lot of tong held tools during their demonstration. Toby Hickman was a huge influence on both Dennis and Brett, and it was Toby who got them making insert tools, as shown in the photo below. The fuller tools and tongs which Dennis used were made with 4140 alloy steel.

Forging the grooves in heavy steel takes a great many hours of repetitive labor. Dennis showed the technique with a sample piece: lines are scored in the bar stock with a grinder to mark the groove, then fullers are used to form the grooves, flipping and working on the opposite side alternatively. The groove remains crisper by defining the edges first. Keep heating and fullering working from the outside to the inside, until all grooves are as desired.



Template for shaping the horizontal piece. An important tool for avoiding burning the original design drawing!



Left: insert tool held by tongs. Right: Fullering grooves. Inset: Sample grooved piece.

This article is a pictorial representation of the demonstration and is not meant to be a 'how-to'. A true step by step article about the demonstration would take many pages. Hopefully you are inspired by what you see and are motivated to learn more.



Working the vertical piece, creating the long tapered top end. Drawing the end out with sculpted fullering blows, under the power hammer and by hand over the horn, using the same fullering tool. This work was expedited by an assist from Fred Crist, striking and holding the piece. Two strikers can really move some metal



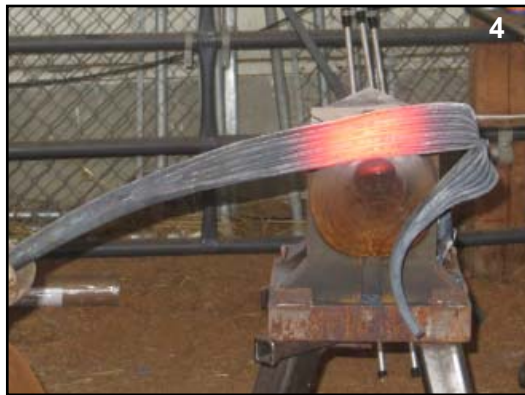
Slitting and forming the two pass throughs in the vertical piece.





Forging the grooved horizontal piece.

1. One end is drawn down for the round taper at the end of the horizontal.
2. The other end is flattened and drawn out to form the tail that will be riveted to the vertical.
3. The radical bend is made by fullering, not cutting, nearly but not all the way through the layers of grooving, and bending, matching the shape to the template shape.
4. The curves of the piece are also fine tuned to match the template exactly.
5. When the piece got too large to fit inside the forge, the forge front was built out with bricks to accommodate it.



Ben Czyhold teamed up with Dennis and Brett to get the job of building this sign done.

Ben forged the sign tongs and forge welded the pre-forged letters onto the tong jaws. He was a vital part of the project, generous with his skills and time, both of which were needed to complete this ambitious project.



Photo Courtesy Frank Bobbio





Fitting it all together.

Above: The horizontal grooved piece is fit in stages, opening the pass through and shaping it to fit at the correct location on the horizontal.

Below: Dennis and Brett drilled holes in the horizontal piece to accommodate the tong rivets, which fastened the tongs directly to the sign.



Above: Pass through of the lower joint.

Below: Assembled with a double headed rivet inspired by a Claudio Bottero technique.



Our three demonstrators, Dennis, Brett and Fred, with the finished sign. >

The NWBA is so appreciative of the time and generosity, inspiration, talents, knowledge, encouragement, and generally joyous spirits you all shared.

Thank you so much Dennis, Brett, and Ben, the sign you made for us is a beautiful, meaningful and valuable gift.

Learning or working with any of these talented smiths is highly recommended. Find out more about them online:

Dennis Dusek: <http://artisticblacksmith.biz/>

Brett Moten: <http://www.infinityforgeinc.com/>

Fred Crist: <http://www.facristmetalsmith.com/>

Ben Czyhold: <https://www.facebook.com/CzyholdMetalDesign>



Photo courtesy Dan Bowyer

NWBA Conference 2015 Gallery

Many thanks to all of the blacksmiths who brought in their work to display in the gallery. Every conference our gallery draws a lot of attention, and for good reason, the work put into these pieces is significant, and the craftsmanship admirable, one can learn a lot from studying these gallery pieces.

Special thanks to Lisa Geertsen, who volunteered once again to organize and install our gallery. Thanks as well to all those who helped Lisa with this very demanding and important job, your time and effort helped make our conference great.

Note: Most but not all of the gallery items are included in these pages, those that are not here are because the pictures we had of them were not print worthy, the name of the maker was not available, or the piece has been in the gallery before.



^ Anne Bujold: "Starving" nickel plated raised and forged copper, tool dip, 2008
Anne Bujold: "Blooming", 2006 >



Alair Wells, Repoussé Copper Sign, 2014 >



Itorye Taubman, Black Dog Forge: Rose Jewelry Box with leather inside, 2015



Dave Lisch, 2 Tomahawks, 2015



Jamie Nugent, Rose, 2015



Andy Blakney, Skeleton, work in progress 2015



Dean Mook, Northwest Sun, 2015 ^



Andrea Lisch, Embedded Encaustic w/ Forged Frame, 2014



George Blackman, Wood Carving Tools, 2015 ^



Dan Bowyer, Door Handle left, Wine Bottle Holder below



Dave Thompson >
Forged Sculpture "Ballet", 2015



NWBA Conference 2015 Gallery



Galen Kennel, Saskatchewan, Canada,
Large Sculpture above, (unknown title)
Repoussé Leaf, 2015 right.



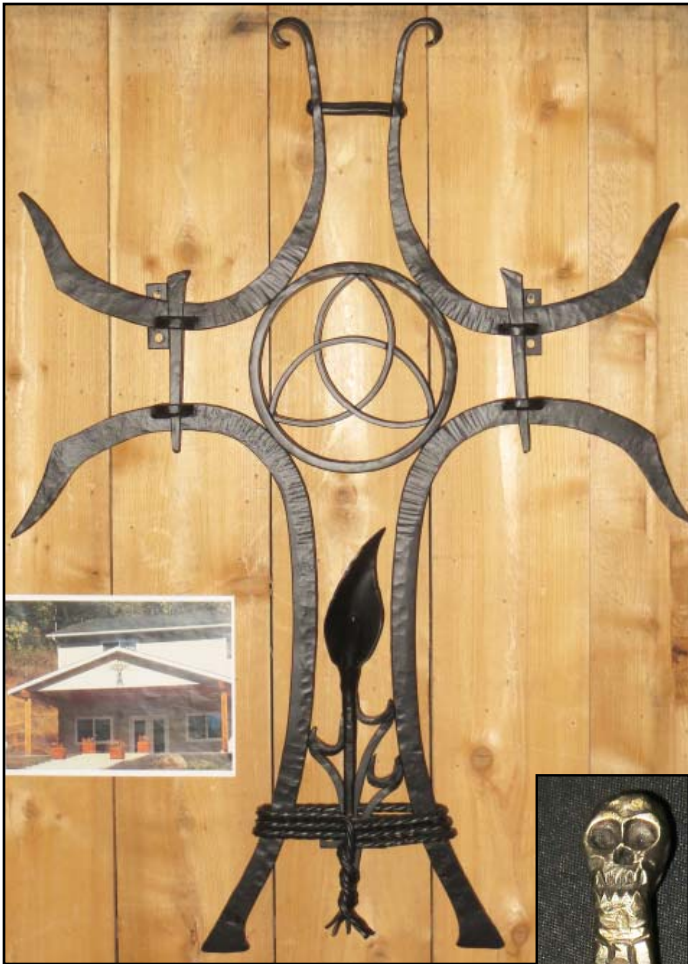
Lisa Geertsen, FABA Demo Piece,
Steel Copper Aluminum, 2014



Patrick Maher, Bar Rail Bracket
(Woodman Lodge, Snoqualmie), 2008



Martin Brandt, One piece knife with
Rawhide, Fur Trapper Period Sheath



Jim Von Mosch: Iron Cross for St. Joseph's
White Salmon, WA. 2015



< Joe Elliott
Table Lamp, 2015



Fred Crist,
Fire Fork, 1984



Silas Maddox, Urn



Doc, Black Dog Forge,
Skeleton Spoon, 2015



Paul Wagner, 2 Knives from files, 2015



Lisa Geertsen
Celtic Raven, 2015

NWBA Conference 2015 Gallery



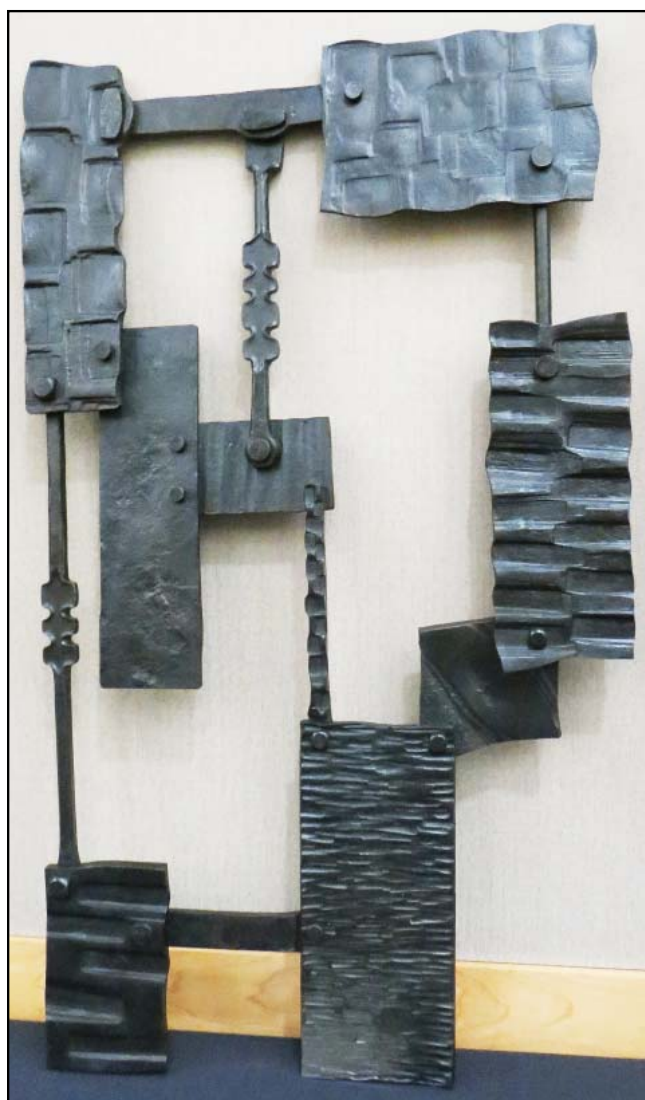
Ben Czyhold
Leaf Fork



Scott Szloch and Michael Prendergast, Chess Set, 2014



Scott Szloch, Standing Tall



Maria Cristali
Fence Sample, 2015



Louie Raffloer, Black Dog Forge
Bicycle Ball Globe

Group Project, Fred Crist
workshop at Gov. Camp CCAC
'Roll Me Over,' 2015



NWBA Conference 2015 Auction

A huge thank you to all who donated to our auction, to those who bought items, and to our volunteer auctioneers and auction helpers. The proceeds from our auction support our ever growing outreach effort, including the monthly Mentoring Center events. Thank you for making what we do possible. Here are many but not all of the items from this year's auction.



Jim Von Mosch, Hummingbird



Lisa Geertsen, Italian Leaf Fork



Jim Hatmaker, Bottle Opener



Anne Bujold, Wall Piece or Candle Holder



Dean Mook, Salmon Trout Head



Lynn Gledhill, Viking Knife



Doc, Black Dog Forge: Coat Hook



Quick & Dirty Tool Co., Larry Langdon & Andy Blakney
5 piece v-bit Tong Set



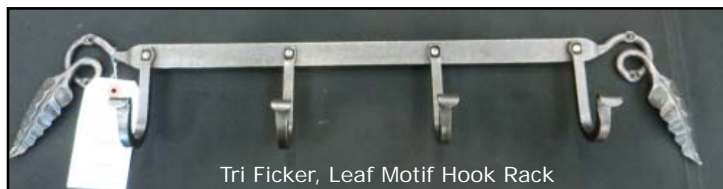
Louie Raffloer, Manacles



< Steve Howell, Cor-Ten Pickups



Dorothy Cordochorea, Cordochorea Creations Jewelry



Tri Ficker, Leaf Motif Hook Rack

NWBA Conference 2015 Auction



Freddie Rodriguez
Mammoth Head



Alair Wells, Belt Buckle



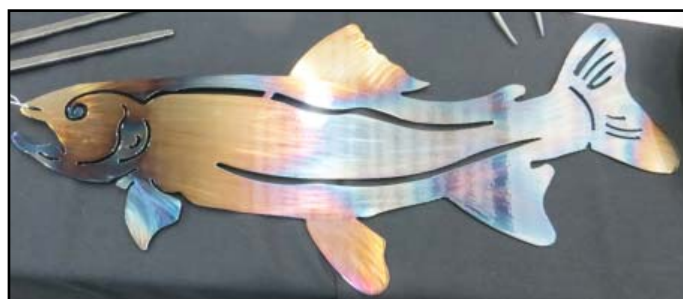
Teeg & Iain Mackai, Steelhead



Freddie Rodriguez
Elephant Head



Pat Maher, Hand Forged Pan >



Chuck Moen, Salmon



Andrea Lisch, Knife



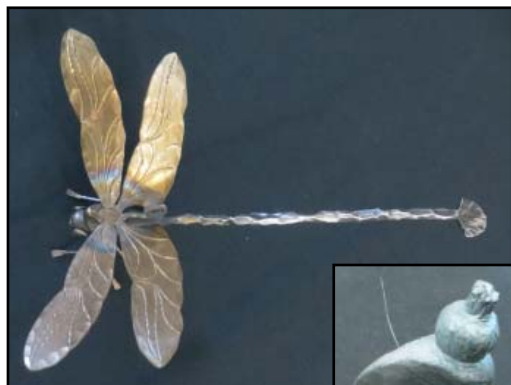
Mark Aspery, Mentoring Center Demo,
Miner's Candle Holder & Swage tool



Dennis Torresdel, Percussion & Pressure Flaked Obsidian Knife



Dennis Dusek Conference Demo, Drawings, pics, Tongs, Drifts



Nitzan Lilie, Mentoring
Center Demo, Dragonfly and
Bird



Silas Maddox, Spatula

**The Tenth Annual Village of Government
Camp
Blacksmith Week 2015
August 19th-23rd**

Sponsored by the Cascadia Center for Arts and Crafts

This event is open to any and all interested in Blacksmithing.

**Demonstrations by : Roberto Giordani of Italy,
Gary Eagle Chesaw, Wa. and
Jeff Holtby Langley, Wa.**

**The Central Oregon Boys- Hunter, Joe, Kellen and
Mark will head a Hands-On Flaming Sculpture
Project that will remain on site.**

DATE: August 19-23, 2015

**LOCATION: Cascadia Center for Arts & Crafts – Summit
Complex in Government Camp on Mount Hood, OR.**

Event fee is \$90.00 for 5 days or \$25.00 per day.

**Pre-registration and T-shirts are available on the Cascadia Center
Website. WWW.CASCADIAART.ORG**

Camping on site is free, there are no hook-ups. A variety of lodging and restaurants are available in Government Camp.

Registration for Blacksmith Week will open @ 9a.m. Wednesday Aug 19th at the old Summit CCC Camp, located across Hwy 26 from the Government Camp Rest Area and due west of the Government Camp ODOT Facility .

There is limited space for both RV's and Tent's on site, Dry Camp Only, with water available for filling container's, No Showers.

As you may know from the past events, there are many lodging options in Govy for those desiring a little more comfort. Lodging opportunities are listed on the Village of Government Camp website, under the lodging button at the top. www.mounthoodinfo.com

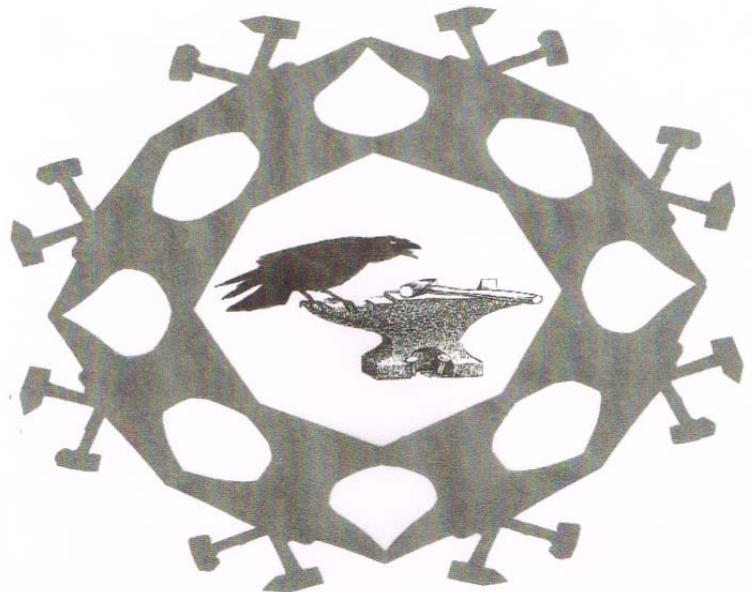
The site is located on the historic Oregon Trails, offering a short hike or bike to Trillium Lake. Ski Bowls adventure Park is in full swing, berries are ripe and Timberline Lodge is just up the mountain 6 miles.

Bring the family, No charge for children. You are on your own for food, once again , Govy offers a wide variety of dining options. This a National Forest and Camp Fires will depend on conditions.

Please bring items to show & sell, there is a 10% commission to CCAC.
Sales have been good at past Blacksmith Weeks.

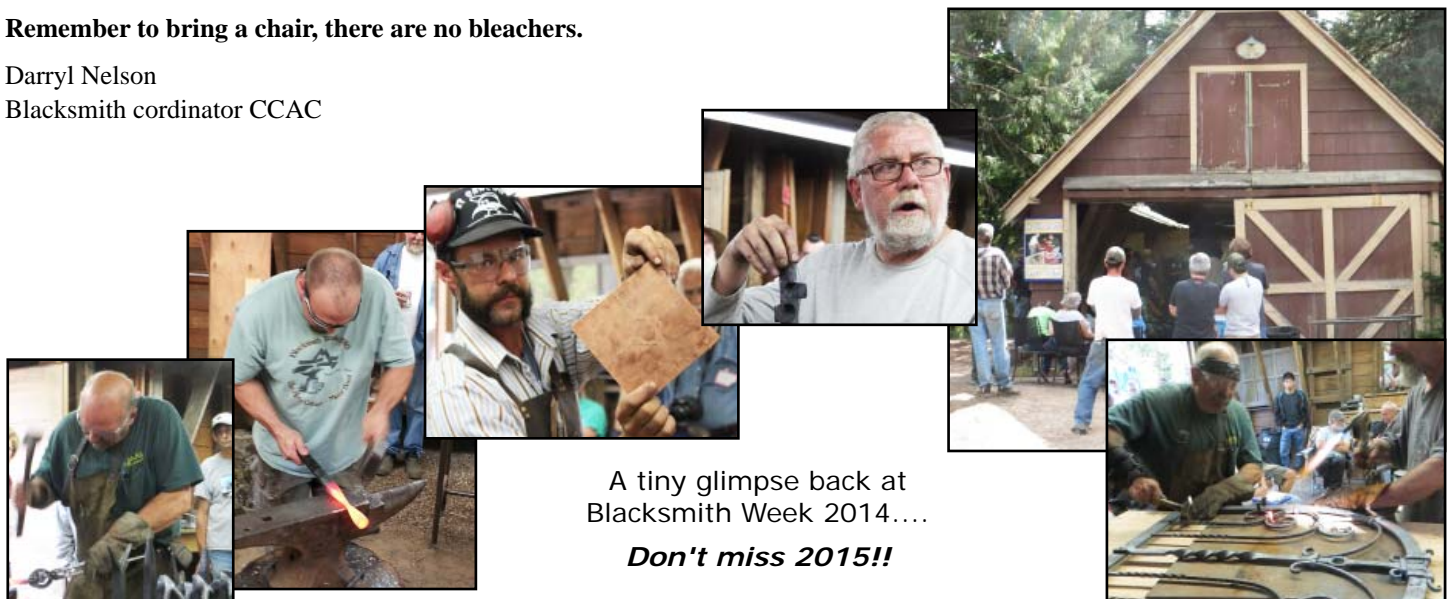
Remember to bring a chair, there are no bleachers.

Darryl Nelson
Blacksmith coordinator CCAC



Blacksmith Week 2015 Logo

Logo T-shirts will be available.
Check www.cascadiaart.org for early registration and
T-shirt purchase



A tiny glimpse back at
Blacksmith Week 2014....
Don't miss 2015!!



Northwest Blacksmith Association

"To promote and preserve the Art and Craft of Blacksmithing while building friendship and good will."

2015 MEMBERSHIP REGISTRATION FORM

The NorthWest Blacksmith Association is a Washington corporation and a 501 (c) 3 non-profit charitable organization founded in 1979. Now over 500 strong and growing. We have something to offer to anyone with an interest in blacksmithing, from the beginner to the serious professional.

Members of the N.W.B.A. receive our award-winning newsletter The Hot Iron News, the opportunity to attend N.W.B.A. semi-annual conferences, frequent hands on workshops and events, and the camaraderie and support of hundreds of blacksmith enthusiasts.

RELEASE OF LIABILITY

I hereby acknowledge that I have voluntarily applied to become a member of the NorthWest Blacksmith Association, NWBA.

I understand that blacksmithing is an inherently dangerous activity that involves certain risks and dangers. I acknowledge and understand that those risks include the potential for bodily injury.

Nevertheless, in full knowledge and understanding of the above risks, hazards, or dangers, I freely, voluntarily and knowingly agree to assume those risks. By my signature below, I hereby agree to assume all responsibility for myself and my property and hereby release and discharge Northwest Blacksmith Association, NWBA; it's members, employees, representatives, associates, independent contractors, and board from any and all claims, demands, damages, expenses, and any other liability for injuries or damages of any description which may occur as a result of my participation in this organization as a member. This Release shall be legally binding on heirs, my assigns, successors, estate, legal guardians, executors and me.

If I am signing this agreement on behalf of another person, I certify that all representations are true with respect to the participant and that I am the participant's legal guardian or custodial parent with full authority to bind the participant and myself to the terms of the Release.

I have carefully read this Release and fully understand its contents. I am aware that in signing this Release I am releasing and waiving certain rights that I may have and enter into this contract on behalf of myself and/or my family of my own free will.

THIS IS A RELEASE OF LIABILITY DO NOT SIGN THIS REGISTRATION FORM AND RELEASE IF YOU DO NOT UNDERSTAND IT OR DO NOT AGREE WITH ITS TERMS.

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*(if you are already registered as a user at www.blacksmith.org your website user account will be updated to allow member privileges only if you use the same email address as the one used to register on the website)

Mail to: NorthWest Blacksmith Association
4742 42nd Ave. S.W. #185
Seattle, WA 98116

To apply online and pay by credit/debit card go to: www.blacksmith.org

Dues are:

\$60 in U.S.A.

\$70 outside U.S.A.

☐ New Member

☐ Renewing Member

NWBA membership is valid for one year from the date of signup. Renewals are sent out on a quarterly basis, look for your renewal letter sometime in the 3 month period around the anniversary of your registering for membership.

Blacksmithing Schools Around the Northwest

Backwoods Blacksmith

Between Sutherlin and Elkton Oregon on Hwy 138.
Instructor and owner is Gene Bland
Beginning blacksmithing, tool making, organic and garden art.
541 459 2879
bland2879@yahoo.com

Cascadia Center For Arts & Crafts

P.O. Box 64
Government Camp, Oregon 97028
<http://www.cascadiaart.org/>
Blacksmithing, Visual Arts, Painting & Drawing, Photography,
Fiber Arts, Glass, Jewelry

Clackamas Community College

19600 Molalla Avenue
Oregon City, Oregon 97045
Phone: 503-594-6000
Website: <http://www.clackamas.edu/>
Offering blacksmithing classes under the Welding Technology
program.

Clatsop Community College

1651 Lexington Avenue
Astoria, OR 97103
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Toll Free 1-855-252-8767;
website: <http://www.clatsopcc.edu/>
Blacksmithing classes are taught through the Historic
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Contact: Steve McGrew:
stevem@incandescent-iron.com
www.incandescent-iron.com/blcl.html

Old West Forge

PO BOX 2105
White Salmon, WA 98672
(509) 493-4418
For additional details contact Tim Middaugh:
tim@oldwestforge.com.
Current classes are listed at www.oldwestforge.com

Pratt Fine Arts Center

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Studio 4

Editor's note: As a 501(c)3 non-profit organization there are limitations
to how we are allowed promote our members' businesses. The listings
will now include contact information and one descriptive sentence for
your school, a policy subject to change.

To publicize your class you may send your event listing to the editor for
inclusion in our online calendar. A short paragraph about the class and
time, location, and fee information only please.

Please send information about your events, school and class listings to
nwbainfo@gmail.com

Thorne Metals Studio

13751 Daybreak Ln
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(360) 293 8257
Current classes are listed at:
<http://learnblacksmithing.com>

If you would like to list your blacksmith school here, please send
your information to nwbainfo@gmail.com.

CURRENT EVENTS: As listed online (<http://blacksmith.org/events/>)

06/13/2015	Open Forge, Cowlitz Expo Center and NWBA Mentoring Center, Longview WA
06/27/2015	June 2015 Mentoring Center: Bob Denman, Gardening Tools, NWBA Mentoring Center
07/02-05/2015	CanIron X 2015, Cape Breton Island, Nova Scotia
07/11/2015	July 2015 Mentoring Center: Wade Seiders, square poll belt axe with a coal forge. NWBA Mentoring Center
08/08/2015	Hardy Tool Making Work Party, NWBA Mentoring Center
08/19-23/2015	Blacksmith Week 2015 Government Camp Oregon, Government Camp Oregon
09/12/2015	Open Forge, NWBA Mentoring Center
09/26/2015	September 2015 Mentoring Center: Nitzan Lilie, NWBA Mentoring Center
10/03-04/2015	Colonial Williamsburg Demo, Fort Vancouver National Historic Site, Vancouver WA
10/09-11/2015	Colonial Williamsburg Workshop, NWBA Mentoring Center
10/24/2015	Open Forge, NWBA Mentoring Center
11/28/2015	November 2015 Mentoring Center: Andy Blakney, Welding & Blacksmithing NWBA Mentoring Center
12/12/2015	December 2015 Mentoring Center: Alair Wells, Powder Coating and Other Finishes, NWBA Mentoring Center

This list does not include many workshops offered by other organizations, you can see the class listings included in the events list
online at <http://blacksmith.org/events/>.

Take advantage of your membership benefits and SEND IN YOUR ANNOUNCEMENTS

FOR THE WEBSITE CALENDAR AND THE HOT IRON NEWS to nwbainfo@gmail.com

or submit it online: <http://blacksmith.org/submit-event/>

Announcements

CanIRON X

**Thursday July 2nd -
Sunday July 5th, 2015**

CanIRON is Canada's national blacksmith conference. It is held every two years, travelling from west to east across Canada. In 2015, CanIRON will make its final eastern stop on Cape Breton Island, Nova Scotia, before heading back to the western provinces. The event will be hosted by the Cape Breton Blacksmiths Association (CBBA).
<http://canironx.ca/>

Demonstrator line up so far:

Zeevik Gottlieb Uri Hofi Mark Aspery
Ian Hope-Simpson Lorelei Sims
Alex Paley

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Announcements that are of general interest to blacksmiths and not specifically in the business interest of an individual will be printed free of charge in the Hot Iron News, at the discretion of the editor and within the guidelines of the NWBA Board of Directors. Submit your announcements for publication in the NWBA Hot Iron News and our website.

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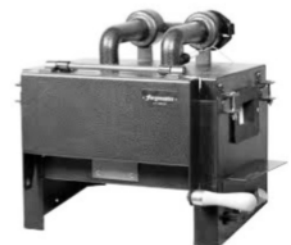


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Classified Ads

Free to members, \$10 for non-members

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Whitlox Wood-Fired Forges are specially designed for forging with raw wood or charcoal fuel. All our forges are made from 11 gauge steel and double lined with kaowool and firebrick for super long life. Use discount code NWBA for a \$50 discount on any fullsize forge at www.whitloxhomestead.com. Phone: 503-952-6540

For sale: Quality blacksmith coal, coke and charcoal.

Contact Jim von Mosch at Mountain Brook Forge 509-493-2246 or Mountainbrookforge@gmail.com for price and availability.

Searching for Information!

There were two nautical blacksmith shop reprints in the Spring 1995 Hot Iron News, and at the bottom of the second one it says, "Thanks to Jess Spromberg for the use of these prints. A booklet of about 72 of these will be at the Spring conference for viewing. If enough interest is generated, more booklets will be printed and made available at cost." I appreciate any help that you might be able to offer me in possibly locating these among your guild members. Thanks! Thomas Boucher newsletter@alexbealer.org

Forum Classified Posts

Join the www.blacksmith.org Forum and post your blacksmith related classified ads for free, great exposure at a great price!

The ads are monitored, no promoting non blacksmith related items please.

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Are you receiving our informative monthly email announcements?

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Get the up to the minute details of NWBA events and news.



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Download Ad Specification and Pricing Sheet online at: <http://blacksmith.org/advertising-hot-iron-news/>

If you have any questions do not hesitate to contact editor

Amy Mook at nwbainfo@gmail.com

Hot Iron News



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Seattle WA 98116

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NWBA Blacksmith Conference 2015
Tailgater demonstrations and hands-on
instruction with:
(left to right) Cori Whitlock, Berkley
Tack, and Steve McGrew
Photos courtesy Dan Bowyer



(others are not pictured due to lack of
photos, apologies to those left out)