

Hot Iron News

THE VOICE OF THE NORTHWEST BLACKSMITH ASSOCIATION

Third Quarter 2013





Northwest Blacksmith Association

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

**President**

Bill Apple
PO Box 244
Burley, WA 98322
360-876-8405 sourapple1@msn.com

**Vice President**

Bruce Crittenden
1041 Andy Cooper Road
Port Ludlow, WA 98365
360-437-2922 jn3bees@olypen.com

**Treasurer**

Darryl Nelson
36914 Meridian East
Eatonville, WA 98328
360-832-6280 firemtforge@hotmail.com

**Secretary**

Brent Christiansen
30338 SE Bluff Rd
Gresham, OR 97080
503-663-3919 metalartsman@comcast.net

**Director**

Tom Ferry
16005 SE 322nd St.
Auburn, WA 98092
253-939-4486 tomferryknives@q.com

**Director**

Andrea Lisch
9239 8th Ave SW
Seattle, WA 98106
206-706-1814 amlisch@earthlink.net

**Director**

Jay McGowan
607 Ronald Ave.
Cle Elum, WA 98922
509-674-8665 jmcg607@gmail.com

**Director**

Dean Mook
234 Monroe
Port Townsend, WA 98368
360-774-0553 info@deanmook.com

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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

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Northwest Blacksmith Association

4742 42nd Ave SW #185

Seattle WA 98116

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Dues include quarterly subscription to Hot Iron News.

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**Nominations for Board of Director are open until the
October Mentoring Center Hammer-In and Board Meeting.**

Come to the board meeting October 26, 2013 at the Mentoring Center in Longview WA and nominate or be nominated, or Contact Jim Garrett, Election Chair, with your nominations, nimba@olympus.net

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ON THE COVER



The Blacksmith Wars Gong and War Hammer: Symbol of everything that is right with NWBA, the promotion of blacksmithing for fun and education at its best. Built for the 2011 Blacksmith Wars, and then auctioned off to the highest bidder, the gong was left at Government Camp in the Museum and rolled out for Blacksmith Wars 2013. Special thanks to Terry Carson, in the cover photo, who organized and orchestrated the war games.

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Mentoring Center Monthly Events

The NWBA Mentoring Center is reopen and monthly meetings are scheduled.

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/>

Upcoming Mentoring Center Events

October 26, 2013: Demo by Lisa Geertsen - Forging pre-cut shapes, followed by open forge Board Meeting at 2 pm.

December 14, 2013: Gift Making Workshop, bring ideas for simple projects to share and learn.

January 25, 2014: TBA

February 22, 2014: TBA

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Sitting on the Tail Gate with Bill...

Hello Blacksmiths,

Summer is about gone as we move into Fall. Western States Blacksmith Conference was a great time, for those that couldn't make it you missed a really fantastic event. Thanks to all of you who helped in any way: from our great demonstrators for a great show, to all of the members that lent a hand along the way. It takes all of us to make these things happen. Membership participation is the only way we can keep all of this going.



By the time you get this we will already be moved back into the Mentoring Center. My hope is to get back on track with our monthly hammer-ins. Mark Manley will be our lead-off demonstrator, with induction forge and tool making as his demo. At Mark's request I will be demonstrating how I put a hammer handle in, as a follow up on what to do after you make the tool. Immediately after the demonstration we will have a membership meeting and nominations for Board of Directors. Open forge will begin after the meeting and nominations. I hope to see some new faces. I really like to see the boy scouts there, they have a passion going on that only a young person has. I guess I like to see anyone of any age finding their path in blacksmithing.

The time to get started blacksmithing is now. The schedule

of demonstrators will be posted on our website and sent to you in our monthly email announcements. Lisa Geertsen will be our demonstrator for October, she will be showing techniques of forging pre-cut steel shapes. The demonstration will be followed as usual by open forge time. A board meeting will be convened at 2 o'clock in the building next door, while the open forge is going on. Come and check it out, all current NWBA members are welcome to be at the board meeting.

Its not too early to start looking at the Spring Conference. The conference will be in May next year, more to

come on that later. As it stands now, there will be no Fall conference in 2014. This is a big step moving forward. If you have any questions on this talk to any board member. There will be a hammer-in every month after January, so we will have more going on than we have ever had. The fourth Saturday of every month in Longview Washington, mark your calendars.

Feel free to call me if you have any questions.

Keep Hammering,

Bill Apple
360 710 2248

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LATE BREAKING NEWS: The September Mentoring Center Demo and Open Forge was a great success. Mark Manley demonstrated using the induction forge to make top tools. Pictured: Bill Apple striking for Mark Manley. The induction forge in action.





Treasurer's Report

by Darryl Nelson

NWBA Second Quarter 2013 Report

Western States Conference 2013 August 22-25 Government Camp, Oregon

INCOME:

Conference	10,623.30
Dues	10,666.17
Sales	138.00
Donations /Auction	<u>8174.70</u>
Total	\$29,602.17

EXPENSES:

Web/HIN	3,071.74
Conference	12,559.48
Mentoring Center	3,548.36
Outreach	
Administration	<u>1,441.77</u>
Total	\$20,621.35

INCOME:

Registration	26,725.00
Sponsors/Donations	7,000.00
Auction	7,856.00
NWBA Sales	<u>2,627.00</u>
Total	\$46,208.00

EXPENSES:

Site/Tents	17,687.00
Demonstrators	13,400.00
Farrier's	1000.00
Porta-Potties	1,289.00
Propane	<u>896.70</u>
Total	\$34,272.70

A Note from the Editor

by Amy Mook

Western States, Western States, Western States!

What more can I say? The Western States Blacksmith Conference was the most amazing event I have been to in years. I was running around from one end of Government Camp to the other trying to keep up with what was going on, and though I got a lot of pictures and stories, I did not capture everything. I am ever so grateful to the members who contributed photographs and demonstration notes to help fill in some of the details. I am mindful that you want real information and not just captions under pictures, and I will be trying to deliver just that in this and future editions of the Hot Iron News.

The NWBA put on quite a show on Mt. Hood:

- **5 Demonstrators:**
 - Freddy Rodriguez - animal heads
 - Bob Kramer - Science and art of blade technology
 - Maria Cristalli - making a modern design log rack
 - Rick Smith - steel repoussé
 - Jon Laubach and Richard Sullivan - welding a rifle barrel
- **Blacksmith Wars:** 4 teams working four 3 hour sessions.
- **Hands-On sessions:** 4 half day sessions with instructors Mark Aspery and Gerald Boggs, and 10 hands-on stations.
- **Repoussé Station:** open the entire conference, with instructors Jack da Silva and Saign Charlestein.
- **Knifemaker Hands-On**
- **Round table discussion:** A dynamic panel of blacksmiths from all paths, and an architect, discussing the future of blacksmithing.
- **Raven Art exhibit** in the Museum.

- **Farrier competition.**
- **Glass tile making workshops** offered by Betsy Valian.
- **Daily Auctions**
- **Tailgate sales.**
- **Banquet** at beautiful Timberline Lodge.
- **Wood-Fired Forge Demonstrations:** Thank you Tammy Whitlock for bringing your setup and demonstrating.



I was only able to cover some of these events. Some of what is left out of this issue will be included in the fourth quarter Hot Iron News that will be published in December, so if you don't see the event you were looking for in these pages, let me know so I can be sure to include it if I am able.

Members of the NWBA should be proud of being part of such an inspirational and generous affair. We all owe a special thanks to our conference host and main organizer Darryl Nelson, without his efforts and connections to Government Camp this conference would not have been possible.

I hope you like the pictures and articles in this edition, I made the fonts smaller and added 4 pages so I could fit more in, and I plan to continue packing future HINs with lots of useful information.

As always, I welcome your articles, photos and recommendations. Contact me via email: nbwaweb@gmail.com or webmaster@blacksmith.org with your questions, comments and submissions.

It is an honor and privilege to be in service to this fine organization, thank you for your trust,

Amy Mook

Western States Blacksmith Conference Blacksmith Wars 2013

Four teams competed in the Blacksmith Wars Challenge:

To build a lamp table that can hold two drinks and a remote control, and incorporating the blacksmith medallion (shown at right) into the design.

Judges for Blacksmith Wars:

Joe Koches - California
Dave Thompson - Eugene
Glen Gilmore - Montana
Alice James - Canada
Terry Carson - WA

The four lamptables were not at all alike, but each fulfilled the required challenge and were built in the allotted amount of time. The competition was fierce, and all the team members had to work hard every minute to get the job done. Blacksmith Wars drew a full house of observers each of its 4 sessions, with a packed tent on the final day.

A good time was had by all, and everyone on a team went home with a bit of hard earned cash as well: the teams each won some money for their final place in the battle, and they took home the amount that their tables sold for. Thanks to the entertaining auctioneering by John Paul, the payout was pretty good.

The team members were exhausted but pleased at the end of the competition, and quite a few of them were heard saying they would do it again.



Above: medallion incorporated into each table.
Below: John Paul and Larry Langdon, auctioneers.

Blacksmith Wars		Thurs	Fri	Sat	Sun
1	Manley Men On Da Hood	94	96	94	384
2	Natural Progression	94	99	94	383
3	The Hot Benders	88	99	92	366
4	Oaks Bottom Forge	84	94	85	346

The final scores: shown are the totals for Thursday, Friday, Saturday, and the Sunday score is the cumulative total.



Blacksmith Wars 2013

Team#1

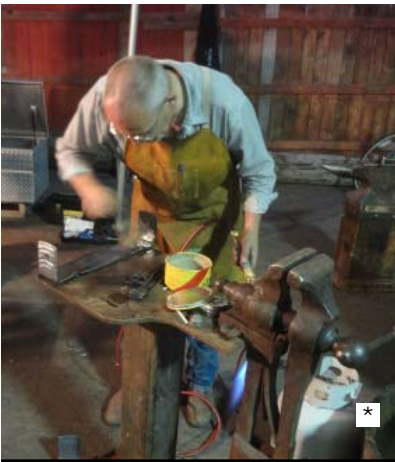
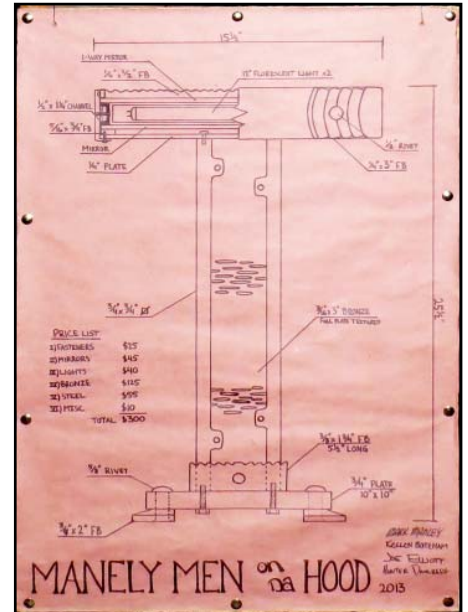
Manley Men on Da Hood

First Place

From Bend Oregon:
Mark Manley
Joe Elliot
Kellen Bateham
Hunter Dahlberg

The Manley Men had a well thought out plan, and skillfully orchestrated the execution of a stunning design. Each member was intently working on clearly assigned tasks throughout the competition.

This team worked with a sense of ease and confidence, bringing home a win, a grin, and a bit of cash - the money prize for their place in the competition, and what their table brought in at auction.



The winning team: Joe Elliot, Kellen Bateham, Mark Manley, Hunter Dahlberg



Team #1 Finished Table: the table top is an 'infinity mirror', gaze into it and see infinite reiterations of the elements inside the box. The medallion is in the center of the infinity box.

* Photos by Mike Mumford

Second Place



From California
Blacksmith Association

< Left to Right
Dennis Dusek
John Barron
Brett Moten
Peter Clark



Natural Progression had a rather complex table design. The small lampshade itself was composed of many pieces; nested copper shade elements riveted to steel framing and hung in place by a stylized fabricated pliers. The medallion was incorporated inside one of the curves of the S-shape making up the tabletop, which when finished was just enough flat area to hold the two drinks and remote, but no larger.

Many thanks to the team for not only playing hard and keeping the competition challenging, but for helping setup and take down the demonstration area when help was needed.



Above: conceptual drawing.

Below: 2 photos of lamp and table pieces before assembly.



Full size drawing.



* Photos by Mike Mumford

** Photos by Robert Brownscombe

Third Place

From Truckee, CA

< From Left to Right

Robby Salas

Matt Christiano

Aaron Bushey

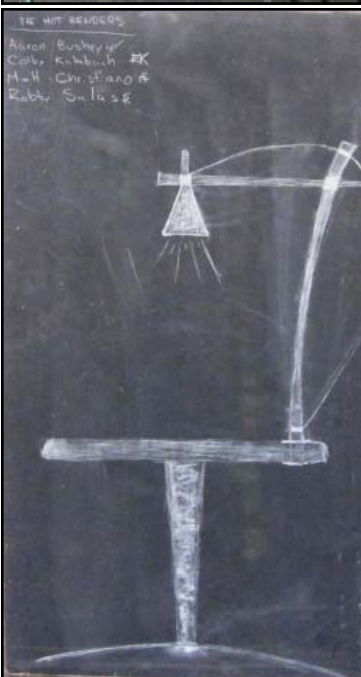
Colby Kalmbach



The Hot Benders lived up to their name, hot bending up a storm as they wove together the lamp shade and base of their dynamic lamptable. This team would have won the dramatic and epic award - if one were being awarded; they climbed ladders in the dark to work the full length of the bars making up the base of the table and had a 4 way striking marathon going on as they

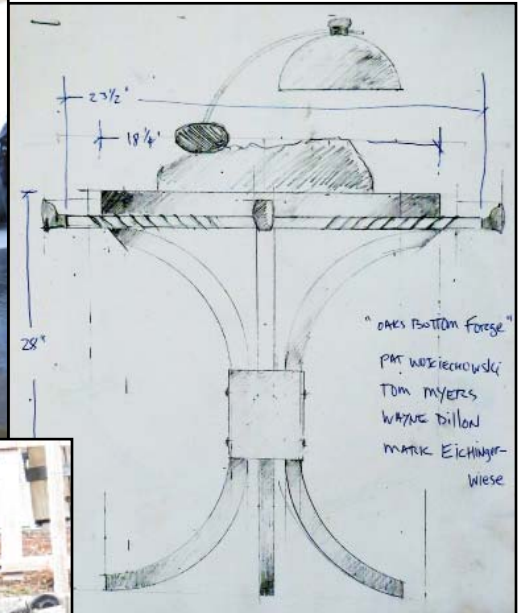
beat the woven parts to lock them into the desired form. They were fearless, overcoming various setbacks as they worked out the bugs in the design, mostly too much flex in the woven parts. They cleverly worked in the medallion as a 'touch on-touch off' light switch embedded in the table top. Congratulations Hot Benders on a job well done,

it was a lot of fun watching you work.



* Photos by Mike Mumford

** Photos by Robert Brownscombe



From Portland Oregon:

Left to right >
Wayne Dillon
Tom Myers
Pat Wujciechowski
Mark Eichinger-Wiese



Oaks Bottom Forge stepped into the competition just days before the conference, with little time for planning and designing. Nonetheless, their design was imaginative and met all the requirements. The lamp was quite

unique, the light shining from within the rock onto a reflecting copper surface above. The medallion was also mounted on the natural rock which was set on the table top. A striking streak of blue stone was embedded in the wooden tabletop as an extra design flare. They incorporated railroad spikes, complicated twists in the circular table frame, and lots of pass throughs, not a simple design. Though exhausted after the wars, as were all the teams, they were all smiles and congratulations, and ready to do it again next time.

Western States Blacksmith Conference Hands-On Demonstrations

Mark Aspery and Gerald Boggs



Mark Aspery has dedicated much of his working career to the teaching of the craft of blacksmithing, and runs the Mark Aspery School of Blacksmithing. He has authored a series of books designed to lead the blacksmith along a course of technique and understanding. "Volume 1: Mastering the Fundamentals of Blacksmithing", "Volume 2: Mastering the Fundamentals of Leafwork", and "Volume 3: Mastering the Fundamentals of Traditional Joinery". The books are available through Mark Aspery's website: www.markaspery.com.

Gerald Boggs is also a blacksmithing instructor in his own school, Wayfarer Forge - the Gerald Boggs School of Blacksmithing in Afton, Virginia.

Students in the hands-on class tried their hand at two of the projects in Mark's books; a combo Wizard Head and Bottle Opener (Vol. 1), and forging a pre-cut Acanthus Leaf (Vol. 2). Mark and Gerald took turns teaching, two sessions each, both taught the Wizard Head and Acanthus Leaf projects. If you

didn't get a chance to take one of his classes, just open one of his books to a project and give it a try. Or, if you want even more, look Mark up on YouTube where he has many how-to videos posted for your learning pleasure.

There was plenty of room for whoever wanted to take a class, I counted ten stations, and not all were busy during the classes. Thanks to Jay McGowan who brought some extra station equipment, and who worked very hard setting it all up.



Western States Blacksmith Conference Repoussé Station

Jack da Silva and Saign Charlestein



Above: Jack da Silva. Right: damascus repoussé hammers. photos courtesy Mike Mumford

Copper repoussé is a metal art accessible to young and old alike. Getting control of the tools takes a lot of practice, but even a beginner can have fun and make something to be proud of.

Jack da Silva and Saign Charlestein made hands-on repoussé available to all conference goers for most of every day. Jack has been a metalsmith for over 25 years and has had a lot of experience making, lecturing and teaching jewelry, metalsmithing and art. Saign has over a decade experience as a prop maker, specializing in intricate metal work.

Thank you Jack and Saign for sharing so generously of your time and expertise.



Above: Saign setup a sheet of aluminum for people to add their design to.

Below and right: Saign Charlestein's class and tools.



Western States Blacksmith Conference: Panel Discussion "The Future of Blacksmithing" Moderated by Michael Bondi

Photos courtesy of Mark Eichinger-Wiese



Above, the panelists, left to right
all blacksmiths of one form or other except as noted.:
Rick Smith, Phil Baldwin, Jim Wallace, Aaron Bushey,
Ries Niemi, Jake James, Fred Borchert, Joe Koches, Darryl
Nelson, Brent Moten, Mark Brown -architect.
Above right: Michael Bondi



The panel discussion, moderated by Michael Bondi, left us with more questions than answers, but that was most likely the point, that our questions energize further discussion and action. The topic meandered somewhat, but generally the discussion centered on how we as blacksmiths, our businesses and our organizations can help to bring the craft of blacksmithing into the forefront of the art, industry and home spheres. That is a big task, and there is not one road to success for individuals. I hope that the discussion can continue and if it is possible to facilitate it through this publication or our website I want to help. Feel free to contact me with your suggestions and requests, Amy Mook webmaster@blacksmith.org.

Raven Art Show: Mt. Hood Cultural Center and Museum, Government Camp, Mt. Hood

The town of Government Camp has put on a Raven Art Show the past few years, and has invited works from blacksmiths attending the Arts Cabins Blacksmith Week, and Western States Blacksmith Conference, in addition to local artists submitting theme related works. The kind people of Government Camp have gone out of their way to accommodate us, and have helped our events on the mountain



Andy Blakney: Deco Raven



Andrea and Dave Lisch:
Raven Chief



Bill Apple: Eagle Feathers
from Horseshoes

to be a huge success. Here are just a few of the pieces that were at the exhibit during Western States Blacksmith Conference 2013.



Darryl Nelson: Leggo



Lisa Geertsen: Raven Catching Sun

Western States Blacksmith Conference Gallery

Lisa Geertsen worked tirelessly to create a gallery, making available to our membership an outlet and showcase for their creations. Thank you Lisa for doing what it took to make it happen. Here are most but not all of the items from the gallery.



Marj Harding:
"Not For Walking"



Jim Von Mosch:
Medicine Wheel Candlestick



Ben Czyhold:
Trivet and
Fireplace Tool Set
with Stand



Dave Thompson: "Angela"



Alair Wells:
Forged Rose

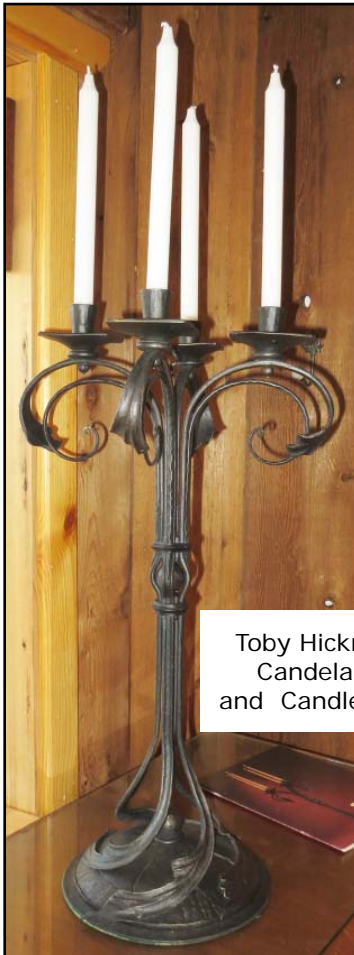


Ethan Froney: clockwise from right:
Hawaii Horseshoe Fishhook, Monstera,
A'Ama Crab





Alan Flashing
left: Dragon Bowl above: Stirrups, Persian Slippers
Below: Knife with Osage Grip, Cable Damascus Knife,
and Winged Heart



Toby Hickman:
Candelabra
and Candlesticks



Bill Apple:
Feathers

Western States Blacksmith Conference Gallery



Freddy Rodriguez:
From Left: Old Upset Gargoyle,
Corkscrew with Dragons,
Alligator, BBQ Mice

Kirk McNeil:
"Elephant Seal Trap"



Mark Manley:
Lattice and Clock



Joe Koches:
Old Piece





Scott Rash:
"Tuesday's Inspiration"



Karl W. Schuler: Rose & Vase
and Small Cross



Joe Elliot:
Eagle Head and Fish



Phil Baldwin:
Seven Heart Trivet and
Deco Gladius 'Sort of'



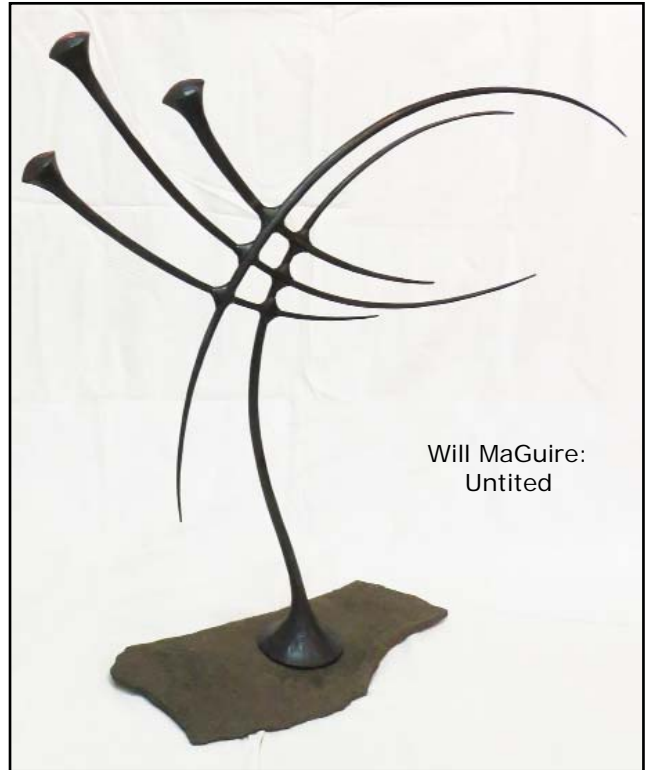
Lisa Geertsen: Clockwise from above: Short Eared Owl,
Jack Sparrow Hawk, Leaf Ended BBQ Forks and Detail,
"Caloosahatchee", "Raven's Wisdom"



Western States Blacksmith Conference Gallery



Dean Mook: Frog



Will MaGuire:
Untitled



Maria Cristalli:
Floor Lamp and
Table Lamp



Don Eckler: "250000"



Monica Coyne:
"Sketches in Iron"



Michael Bondi:
"The Way We Were"
and Table Lamp



Phil Stringer: "Western Slopes"



Joe Koches:
Glass Vase Holder



Saign Charlestein:
Corinthian Helmet



Ries Niemi



Bert Romans:
"Spirit Cross"



Peter Clark:
Spatula Set and Skillets

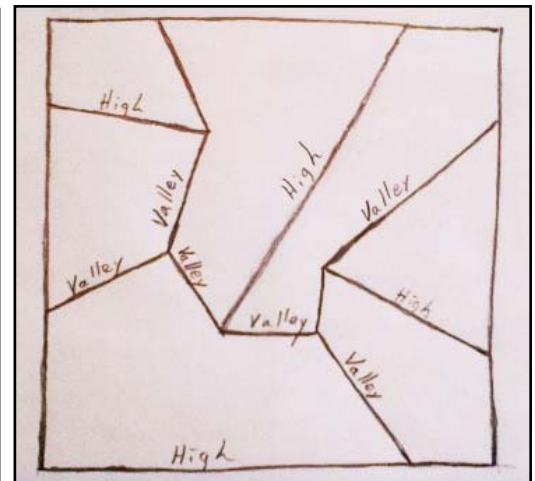
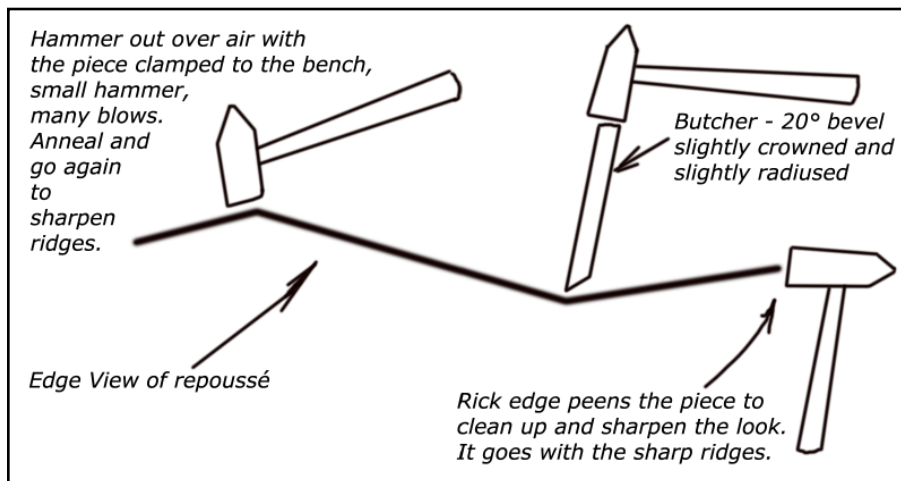
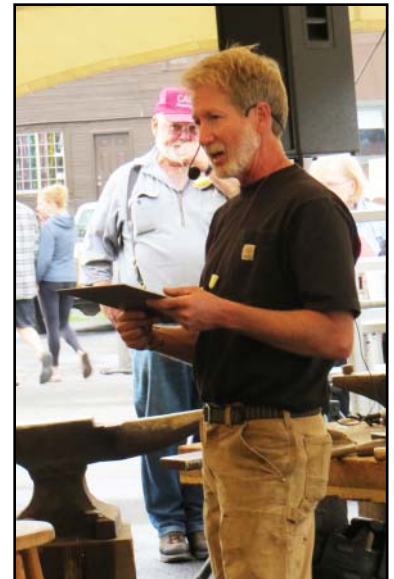


Western States Blacksmith Conference

Rick Smith: Repoussé in Steel

Notes and drawings by Galen Kennel

- Rick asks: "How can you express yourself with metal?"
- He uses 12 to 10G approximately 1/8" plate steel, 1008 draw quality or A36 mild steel.
- Heats with a rosebud to anneal and works cold until too hard.
- Dome, then choose your high points, mark the plains that you want developed, then chase in the valleys.
- Sink (work the piece) until it quits moving and or vibrates too much. You can feel and hear it. Then anneal again.
- Get the material to move rather than pinch or thin. Brush the scale often to help even out the surface tension.
- He clamps his plains flat to the anvil or iron block to work at chasing internal transition lines, working both sides to get those geometric lines sharp.
- Use the ranges of hardness and softness when spot annealing to work to your advantage.
- Hammer those ridges with many small blows to get sharp and straight.
- By sharpening and upsetting the edges a little, it looks thicker and framed.
- The piece finished out about 1 1/4" relief. From highest to lowest points.



continues on page 22, Rick Smith ...

Western States Blacksmith Conference

Freddy Rodriguez: Forging an Elephant Head

Article and photographs by Gary Lewis

Demonstration by Freddy Rodriguez Caro,
Paipa, Columbia, South America

The purpose of this article is to give a general overview of the steps of forging an elephant head.

Starting with an approximately 1 1/2" x 3" long piece of steel, Freddy forged out an amazingly realistic elephant's head.

Looming over his young assistant, Jack Sanders, Freddy began drawing out a blunt taper about 2" long and working it over the horn to stretch out the trunk.

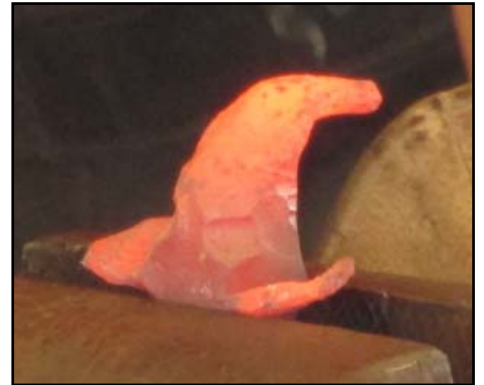
He then placed it in the vise to split the ears, from the back of the piece, using a chisel. Leaving the ears thick, so they don't get burnt, he then refined the trunk some more over the anvil horn.



Freddy Rodriguez Caro & assistant Jack Sanders



Photo courtesy Robert Brownscombe



Back into the fire and then placing it in the vise again, he shapes the facial structure and chisels lines for the tusks, again not separating them yet so as not to burn them. The mouth is then created with a chisel and the trunk refined further.



After several more heats refining the face and head, the tusks are chiseled away from the piece and worked along with the trunk over the horn.

continues on page 22, Freddy Rodriguez ...



...Freddy Rodriguez continued

The ears are spread with the piece in the vise with a rounded blunt chisel.



Hopefully this gives you a general idea of what to do if attempting one on your own.



...Rick Smith continued



Above: Rick Smith at his first Western States demonstration, and the piece at the end of the demonstration.

Left, Right and Below: Rick's second demonstration and demonstration piece.



Western States Blacksmith Conference

Maria Cristalli: Building a Modern Design Log Rack



During the course of her two demonstrations, in a total of six hours, Maria Cristalli built an elegant modern design log rack. Maria incorporated a few methods of joinery and quite a number of other handy tips for concept, design and construction in her demonstration.

Shown at the left is a close-up of two joinery methods featured in the demonstration. An approximately 1 1/2" x 1/4" x ~18" length of connecting bar joins the two semi-circularly bent flat bars which make up the cradle for the logs. The cradle pieces were slit and drifted to enable the pass through of the connecting flat bar, which was then knocked over and flattened like a rectangular rivet/tenon head. The detail can be seen in the sample piece laying on the table next to the log rack. The

second joinery method, also with a rivet finish, is a very clever twist on a simple round bar rivet. Maria used a piece of square stock to form the rivet, which passes through square holes. She rounded the bar on both ends, which when hammered to flatten the rivet head would then appear to be a normal round rivet. The square bar in a square hole prevents the two pieces from swiveling, enabling the use of one rivet where two rivets would be needed if they were round in a round hole.



Maria gets assistance from Matt Gilbert of Philadelphia, PA

Maria's presentation was clear and precise, deliberate and well thought out. She generously shared her experience and knowledge, however, what is not so easy to give over is her artistic sense of functional design. Is that something that can be taught? General principles of design perhaps, but putting it all together - design, function, and beautiful execution, that is a gift.

Thank you Maria.



- 1) Maria carefully measuring the joining bars.
- 2) Scale steel model mock-up of the log rack, held into place by tiny powerful magnets, what a great idea!
- 3) A favorite tool, the slitter used to create the pass through for the bars.
- 4) Finishing the bar rivets, square hole visible on the bar.



Two completed log racks: on the left, the one built at our demonstration, on the right the one Maria previously built as a test model.

Western States Blacksmith Conference

Jon Laubach and Richard Sullivan, Gunsmiths: Barrel Welding:

Notes and photographs by Hardie Swage, humble scribe

Swamped barrels were common on American flintlock long rifles. Their profile is a long gradual taper from the breech end that flares out again close to the muzzle. The muzzle is smaller in cross section than the breech. Jon Laubach and Richard Sullivan set out to make just such a barrel for the Western States conference at the village of Government Camp on Mt. Hood. What follows is a process outline of their demo, and not meant to be a detailed manual of barrel welding.

1. Start with a skelp 3" wide, 38" long or longer and 3/8" thick. For the entire forging process, from the very start to the final blow, constantly checking for straightness and uniformity; corrective steps taken all the time. Project overview: weld up a tapered barrel and then upset the end to create the flare part.
2. Draw a taper side to side. 2 1/2" wide at muzzle end, 3" wide at breech end. This will increase length. Bring back bar to uniform 3" wide width its full length. This transfers the taper to thickness. Goal is 1/4" X 3" at muzzle, 3/8" X 3" at breech end. This grows the length.
3. WHY TWO STEPS, not one? As you work down the bar it is easier to keep tapers straight and uniform. Very important in this work.
4. There may be a slight thickness to outside edges, edges are upset to provide more iron for the butt weld.
5. Cup and straighten. Use a fuller (1 5/8" wide with gentle radius) and working the sides with hammer. Cup/straighten- repeat, repeat, repeat length of the bar. End result slightly more than a straight sided "U"
6. 2 mandrels are used, 1/2" is used for the first welding heat at a new section, 3/8" is used at the second heat of the same section to produce a better hole and eliminate the tear drop effect resulting from the initial weld. Made from round stock, longer than half current bar length. Well centered point on one end and a short 90 degree leg on the other. Point goes in section to be welded and short leg gives you something to hammer against if things stick.
7. Start the welding in the center of the bar. Will work toward the end and then reverse. Gives you a cold end to hold and reduces the need for tongs.
8. The initial complete fold (ends touching) is longer than area being welded. As you move forward keep the complete fold ahead of the area being welded.
9. Each welding heat Richard "jumps" the skelp on a floor plate that acts as an anvil. Sheds scale and gives a slight upset. Barrel grows in length during welding process.
10. Flux well and heat from the back until edges getting close to color, heat the sides. Flipping one to the other and the final heat step is edge down in the fire.
11. Use the last of the welding heat to bring fresh edges from the cup into close proximity.
12. Constant adjustment to straightness through entire process.
13. Straighten mandrel point/shaft each heat.
14. Mandrel is jammed in until it binds and lays flat at bottom of the cup fold..
15. Each heat: rework the prior welding and advance a little. Each section of the weld is worked several times before being left alone.





16. During welding process, work all sides of the fold to press the ends together and keep side wall thickness uniform.

17. Seamless weld is only acceptable standard. Any sign of weld means area not welded. Inside corners touch first and then more edge surface meets as the material is pushed together. Twist in weld does not matter, but sides must be kept straight.

18. Once the full length is welded; a lot of smoothing (top and bottom half round swages) and straightening, goal a straight and uniform taper. Uniform = same on all sides

19. Forge flats (octagon) with hand hammer and a lower heat. You want to move the outside and minimize movement inside. Expect bore to be reduced some what.

20. Start a section behind muzzle, forge square and then octagonal. Then work down the bar doing all 8 sides in an area before moving on. Use larger mandrel when working the barrel ends.

21. Straighten and keep uniform. It is a full length taper. You can correct twist in vice if necessary. Better to detect early and correct at the anvil.

22. Upset the front (muzzle) end to create the flare. More bringing back to uniform and true.

23. Pickle barrel to eliminate forge scale prior to boring/reaming and draw filing of the flats. Vinegar works well and is historically correct.

24. Boring- bore from both ends to middle. Bits can break or jam. Make out of steels that can be annealed by heating the barrel. If a black spot persists well into the reaming process, heat the area and push the barrel wall in.

25. The demo barrel can be taken out to 58 Caliber in Jon and Richards opinion.



Above and Below: Two views of hammer used by the gunsmiths during the demonstration. face 1- 7/8" X 2" peen 2 X 1/2"



Jon Laubach is retired from Colonial Williamsburg having started there in the early 70's. His work can be seen in Robert Weil's, Contemporary Makers of Muzzle Loading Firearms and Three Centuries of Tradition, The Renaissance of Custom Sporting Arms in America by Mark Silver and Wallace Gusler. The latter book is based on an arms exhibit at the Minneapolis Institute of Arts 2003, covering various styles from 1640 to 1940.

Richard Sullivan was a high school history teacher coaching several sports. He worked some summers at the Williamsburg gun shop in the 1990's before coming on full time in 2003. Both of these men are members of the small club of gunsmiths who have made flint lock guns entirely from scratch. The rifles produced on the Colonial Williamsburg gun shop currently sell in the \$17,000 range and there is a very long waiting list.



Western States Blacksmith Conference

Bob Kramer: Knifemaker - Steel Alloys and Blade Edge Technology

Bob Kramer's philosophy in life and his work, as stated on his website, is "relentless pursuit of excellence." In this vein he has been in search of the ideal steel for knifemaking, something that can be sharpened to a micron in thickness and hold the edge through heavy use. He has travelled around the world to learn as much as he can about the state of the art. The history of blades and blade making is an ancient one, and Bob honors the traditions and has gleaned a storehouse of wisdom from the old ways. He does not hesitate to use the newest technologies either. When he experiments with making steel alloys for hardness and ability to sharpen he uses the most advanced testing labs for precise understanding of the composition of the steel, and he uses a high power microscope to visualize the blade's edge at the finest resolution. It is not enough for Bob to understand what makes the ideal blade, it is his never ending quest to improve on the best to make it better.

Bob's stories of the Javanese bladesmith culture were fascinating. Being a very respectful and humble person, he was granted access to sacred knowledge and introduced to people revered for their craft, much of which is veiled in secrecy from the casual tourist. From the other end of the technology time spectrum, Bob discussed the high state of edge technology in Japan. There, the competition for the sharpest edge is very intense and the standards of blademaking are very high.

The sharpness of a blade is limited by the size of the crystalline structure of the steel itself, and much progress is being made in this area by the steel industry. Bob discussed at length ways in which the industry is working on refining the grain structure of the steel: using different blends of iron, chrome, tungsten and manganese and even atomizing the blend rather than pouring it to achieve this end.

Bob's knowledge is not just in the realm of the theoretical, he gets equal satisfaction working on improvements for the practical use and upkeep of the knives he makes, and is the only Master Bladesmith in the world specializing in kitchen cutlery. It is a privilege to learn from Bob, if you get a chance to see him at a future demonstration be sure to bring a good pen and plenty of paper, or record it, because he delivers more useful information than can be retained by just listening. If you want to learn more about Bob Kramer and his knives you can visit www.kramerknives.com, or look him up on YouTube where he has dozens of demonstration videos posted.

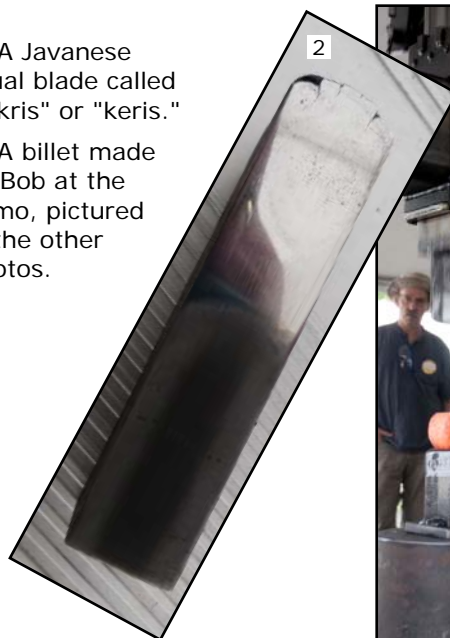
STEEL					
	C	MN	SI	W	V
JAPAN #1 TAMAHAGANE	1.31	.01	.02		
W002	1.0-1.8	.005	.005	3.00PPM	
WHITE STEEL	1.07	.241	.159	.001	
TOKU Z BLUE	1.17	.222	.170	1.19	
BURK	1.18	.007	.104	-	-
A36	.25-.29	1.03	.28		
ELECTRO	.001	.0001	.0001	.0001	.0002
SOPEL	3.9-4.7	.015	.40		
W1	.70	1.5	.10	.40	.10
1075	.9	.03	.35		

Demonstration chart showing various types of steel and their alloy composition.



1) A Javanese ritual blade called a "kris" or "keris."

2) A billet made by Bob at the demo, pictured in the other photos.





Farriers gathered at Western States Blacksmith Conference for a series of competitions, presented by the Oregon Farrier's Association and NWBA. They were judged by Scott Davidson, CJF, at various skill levels, for shoeing and forging, working individually and in teams. Their most impressive mobile shop setups were outfitted with everything they could need, custom rigged to provide easy access to their tools and forge. The competitions were not demonstrations, very little explanation was given, but I was fortunate to stand next to a knowledgeable onlooker who generously answered many of my questions and helped me to understand what was going on. For more info about the craft of the farrier and the Oregon Farrier's Association go to: <http://oregonfarrierassociation.com/>



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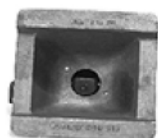
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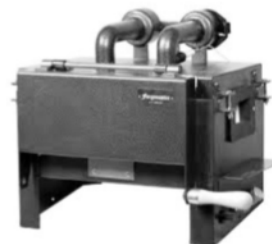


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The NorthWest Blacksmith Association is a Washington corporation and a 501 (c) 3 non-profit charitable organization founded in 1979. Now over 500 strong and growing. We have something to offer to anyone with an interest in blacksmithing, from the beginner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

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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

CURRENT WEB EVENT LIST (<http://blacksmith.org/events/>)

- September 28 Mentoring Center Demo and Open Forge: Mark Manley, using and induction forge.
Cowlitz Expo Center, Longview, WA
- October 11-13 Stephen Mankowski, Journeyman Blacksmith-Colonial Williamsburg Foundation
- October 18-20 Steve Mankowski, hands-on class, check www.blacksmith.org for location.
- October 19-20 Inland Northwest Hammer-In and Swap Meet, Steve McGrew, Ron and Trudy Weston
- October 26 Mentoring Center Demo and Open Forge: Lisa Geertsen, Forging pre-cut steel shapes.
- November No Mentoring Center event, 4th Saturday is Thanksgiving.
- December 14 Mentoring Ctr. Open-Forge: Gift making workshop, bring ideas for simple projects to share.

**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

A Weekend with Stephen Mankowski, Journeyman Blacksmith with the Colonial Williamsburg Foundation

The Fort Vancouver Trades Guild and the National Park Service will be hosting a 3-day demonstration by Steve Mankowski, Journeyman Blacksmith with the Colonial Williamsburg Foundation. The demonstrations will feature traditional methods of blacksmithing drawing on the extensive collection of early 1800's artifacts found at Fort Vancouver. Cost: \$20 per day.

Dates: October 11, 12, 13, 2013

**Location: Fort Vancouver National Historic Site
Blacksmith Shop**
For more information contact:

Tom Dwyer
President, Fort Vancouver Trades Guild
360-901-7557 tdwyer55@comcast.net

Hands-on opportunity with Steve Mankowski at Meridian Forge October 18-20.

\$350 for the class, \$100 non-refundable deposit holds a class position.

Send deposits to 36914 Meridian East, Eatonville, WA 98328 or call 1-360-832-6280 for more information.

IMPORTANT NOTE: As of the time of this publication the LOCATION of the hands on event may not be correct. Please check the website www.blacksmith.org for current information.

Not exactly *new news* but important info:

Little Giant Changes Ownership

Little Giant is changing ownership, effective immediately. In order to perpetuate the line of replacement parts, repair services and information, Little Giant will now be in the extremely capable hands of our machinist, Roger Rice. He will be assisted by our friend David Sloan, who has a great understanding of the mechanical operation of Little Giants. We will be assisting Roger and Dave with the transition, and Sid will continue teaching the annual Little Giant rebuilding class. Same phone 402/873-6603 and email lgiant@windstream.net will move to a new location at Midwest Machine, 6414 King Road, Nebraska City, NE 68410.

It has been a great 22 years, and we are profoundly grateful to have been a part of the blacksmithing community. It has been an honor not only to help keep these venerable machines in operation, but also to have made so many good friends.

With sincere appreciation,
Sid Suedmeier and Keri Hincker

The editor of the Hot Iron News wants your pictures and your articles.

If you have pictures from past conferences and NWBA events, or if you have great notes from a conference demonstration, or if you have pictures of a project that you want to share, PLEASE SEND THEM TO US, email to nwbainfo@gmail.com

or by mail to: Northwest Blacksmith Assoc., 42nd Ave SW #185, Seattle, WA 98116

Al Bart Grant Information

The NWBA's Al Bart Memorial Grant is now open to anyone interested in learning about and spreading the knowledge and interest in the art and craft of blacksmithing. With our new status of non-profit charitable organization comes the unexpected gift of sharing this opportunity with more people. It is the hope of the NWBA that The Al Bart Memorial Grant could enable interested persons to attend an educational program such as a workshop or class with the intention of learning something new and sharing that knowledge and experience within and/or outside of our association. All interested persons are encouraged to download the application and learn something new. Find out more details and download the application at our website: <http://blacksmith.org/al-bart-grant/>

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 discrepancy 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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