

∞ EUGENE 5160 CLUB ~ JULY 2014 ∞



JULY MEETING

The 5160 Club will meet at Woodcraft of Eugene in the Delta Oaks shopping center – Beltline & Delta Hwy. July 3rd at 6:00 pm. We'll have show & tell & pass-arounds.



JUNE MEETING

I (**MICHAEL KEMP**) Opened the meeting with a brief mention of having broken a blade-in-progress and that I was working on a cable “Damascus” one to replace it. Don't hold your breath – it turned out that the cable was mild steel. I know I know – always test when you pull a piece from the mystery pile. Having forge welded, then forged, ground and attempted to harden the unhardenable – I'll **test first** next time.

WAYNE GODDARD had brought in a short section of railroad rail to give away. Wayne took the floor to discuss his experience making anvils from railroad rail. Wayne uses the bottom of the rail for the anvil surface. Before you put the work into converting it to an anvil, test it for hardness by tapping with a hammer to feel the rebound – or dropping a ball bearing and seeing if it bounces most of the way back to the height that you dropped it from.

You can cut a square hardie hole cut in one end. Cut out a square notch 1” on a side, then weld a piece over the end to enclose the hole.

For a standard sized rail like the one he brought in, Wayne recommends cutting it down narrower (cut 3/4” off each side).

The main issue is how to add weight to the anvil. Wayne likes the anvil to be heavy enough that when you work on it the loose scale doesn't bounce up. You can weld sides on the rail and fill the hollow up with metal and lead scraps. You can bolt down the rail down to scrap chunks of metal. If you bolt it all down solidly to a base – the base becomes part of the anvil's effective weight.

For instance one anvil Wayne made had only 75# in the rail. Under that was a piece of steel and an old aluminum pan filled with lead scraps he melted down. That and the base added up to almost 500#.

But again – don't put the energy into building the anvil if the face isn't hard.

Wayne relayed some stories about hardening a couple of anvils that had soft tops (one had been through a fire): schemes and contrivances for heating the face to hardening temp – and for supplying enough water to fully quench the beast (or drop it in a river).

A discussion of thermite welding and railroad rail repair followed... and thoughts about the trolley rail that they're pulling out of Eugene streets... and jeweler's anvils... and various anvil collections...

ERIK LAND came forward to share that he's changed the way he constructs his folders. These changes create a more consistent and easier opening and closing mechanism for his folders. Here's two of his folders – the top one is snakewood and O-1. I believe he said the other was spalted maple. Beautiful work – and the action is excellent.



He also shared a knife he made from Damascus steel and wenge scales.



He carved the case also. This is to be auctioned off in support of an annual disabled veterans hunt that the Knifedog forum puts on (a link to the forum is at the end of the newsletter). Well done Erik!



Here's a close up of the knife itself:



Erik is up over 100 folders now and starting to feel he's "getting somewhere with them" (*I'll say!*). "I've got a drawer full of 'em that are never going to see the light of day."

Someone chided him about rebuilding some of those old almost-right folders. "Naw" said Erik "You think about what you've got into them and it's maybe \$15 in materials and 10 hours in time – when you think about it, anything we make, the materials are really the cheap part of it – it's the time and the labor and the crying that's the hard part."

Erik's always done excellent work on his folders – and now the action is easy, firm, and snap-snap nice!

There was some speculation about the sub-sub-sub-minimum wage nature of the enterprise.

"It's like the knife maker that won the lottery" said Craig Morgan. "What're you going to do now?" he was asked. "Oh I'll keep making knives until the money's gone."

MIKE JOHNSTON brought in a box of cookies his wife sent – which promptly went around the room!

"The NWBA (<http://blacksmith.org/>) conference up in Longview was well worth the time. Dorothy Stiegler (<http://stieglermetaldesign.com>) was a presenter and she was doing bronze forging and doing absolutely gorgeous work" Mike said. "She let me know that she had been one of Wayne's students years and years and years and years ago... she's making a ton of money forging bronze and doing

architectural work” (*I’m betting that “a ton of money” is by bladesmith standards, not Fortune 500 standards*). Mike said that the conference in general was very informative and a good time was had by all... *which is par for the course for the NWBA.*

Mike then shared a couple of new blades he's made using Peruvian walnut that he purchased at Woodcraft a couple of meetings ago. “It works really nice, sands really nice, seems to take finish really nice.” The steel in the blades is truck coil spring which hardened up well. He used salt water electro-etch for the logo.



The second knife is his “one-day-knife”. From forging through grinding, heat treat, hafting, and sanded up to 400 grit. To see a photo of the knife after final sanding and finishing, see page 5.



For putting the layers of the handle together Mike used the thin version of superglue (aka CA glue aka cyanoacrylate glue).

The guards are just pressure fit – no silver solder.

JIM PENNOCK was up next. He said that he was inspired by Hershel House's video of making a file knife. So he made a knife to put in his muzzle-loader bag. As Jim works in a machine shop, there is a box of used-up Nicholson Black Diamond files to be had.

He ground the edge down like a sheep's foot, did some forging on it, and burned the tang in. He got some lead free pewter from a contact on Bladesmith's Forum (see links at end of newsletter).

Asked if he'd taken all the teeth off the file, Jim replied “Well I thought I had but up on the side you can just see a few of the teeth.”



Jim made his forge from an old BBQ cylinder, lined with castable refractory cement over firebrick – which keeps the heat for a good long time.

He's using a Coote grinder (see the “2x72 Belt Grinders” links at the end of this newsletter) – “which is a really good grinder considering the cost.”

Martin Brandt noted that even when you physically grind the teeth off a file, the teeth pattern can still show back up in the underlying metal.

The shadow of the teeth comes back when you polish the steel or after etching. Marty noted that when the police work to identify a firearm which has had the serial number ground off they will use an acid etch to bring the number back out. Apparently the impression in the underlying steel changes the grain enough to retain the image.

From there conversation turned to an online video of a French file maker cutting the teeth in a file by hand – chiseling in the individual lines. Talk about labor intensive!

Jim was also inspired by a Murray Carter book for the design of the following knife. The steel is from a GMC truck spring and the handle is mahogany.



While this was inspired by a “neck knife” design, Jim indicated that he wasn't thrilled by the idea of having a knife hanging right there.

This started a lively discussion of the neck knife style. Both proponents and detractors had their say.



KEN shared a few anecdotes from recent shows – including talking to a knifemaker named Foy Cochran who was using moose for knife handles. When Ken noted that moose antler is notoriously porous and will expand and contract with changes in moisture – Foy replied “well it's not antler – it's shin bone.” Ken asked if he could buy some

small scraps of his moose bone. “He told me no.” “And there's a reason for that” Foy said, “I'm gonna give some to you.” So the next day he brought a bag of decent sized pieces – died in various ways.” Foy uses mostly moose bone and cow bone. Here's a photo of one of those pieces:



OWEN McCULLEN

shared a unique knife he purchased at a recent show. “If you can tell me what those groves do I'll sell it to you for half price” the dealer said. Owen figured out that the groves in the blade are where the fold-away saw blade snaps in place. *(note: I'm kicking myself – it seems that I missed taking a photo of this saw/knife combo. And the sheath was unique too, with a double belt loop – one above the other so you can wear it low or high on your hip.)*



It's a Leatherman. The dealer said that his son got it at the factory – that they made only 100 of them – and it was not generally released for sale. Owen

hasn't verified these statements. Only the saw folds – the knife is a fixed blade – and the dealer said “it'll cut brisket like you wouldn't believe!”

Wayne relayed his first meeting Tim Leatherman at a show. Tim showed Wayne a prototype multitool to get his feedback. Wayne likes to think he encouraged him on his way.

Somebody else piped in that Tim took his idea to Gerber and Buck. They both turned him down so he went off and made them on his own.

Someone else added that if you get a chance you should take the Leatherman plant tour. *According to the video on this page <http://www.leatherman.com/tour.html> they turn out 12,000 tools per day. Yowzers! I gather you sign up for the tour at the retail store (10109 NE Cascades Pkwy out at the airport shopping mall) and the factory is about a mile East on the other side of I-205. I'm writing all this down in the newsletter so I can find it next time Danita says she just has to spend a few hours at Ikea and the other shops. Downside: the tour is only on Wednesdays at 10:00.*

Jim Pennock that noted that his shop (a cylinder manufacturer) has chrome plated 1045 shaft “and we throw away buckets of it and sometimes we get some of the larger 7-inch shaft...” that would make a great **post anvil** like the Japanese use. He has a couple of pieces at home and gets it for something like 8 cents a pound. Some of the pieces are up in the 150 pound range.

There was some discussion of using jeep coil springs and rail car springs for forging – and getting great results. Some of it produces a nice temper line.

Since we still had some time before they would close up the Woodcraft store, I hooked up my laptop to the overhead TV and showed the first video in the series of Niels Provos forging the “Serpent in the Sword”: <http://www.youtube.com/watch?v=vyUkYJeZtW4> If you haven't seen any of this series of videos, take a look! It's a treat.

I couldn't get the sound working through the HDMI TV connection from my laptop but I believe I've found the incantation to get it to work next time.

There was follow-up discussion of Northern European bladesmithing (from the late Roman empire through the Viking period) – including NOVA's “Secrets of the Viking Sword”: <http://www.pbs.org/wgbh/nova/ancient/secrets-viking-sword.html> Followed by a discussion of layered and cable “Damascus” forging in general.

From there it was informal discussions until they blew the “train whistle” to signal closing time for Woodcraft – we sure appreciate Woodcraft hosting our meetings. Thanks Joe Essen & all the crew!



Wear your safety gear – no synthetic clothing at the forge or loose hair in the shop – and have fun!

Keep Well ~ ~ ~

Your Scribe

~ ~ ~ Michael Kemp



MIKE JOHNSTON sent a note re: “a fast and good finish” that he tried out. Mylands High Build Friction Polish.

Here's his note: This is the stuff I used on the one-day-knife handle. Woodcraft said it is used for turning and needs high friction & heat the work best. It dries VERY fast. Sanded lightly between the 3 coats with 1000 grit. I tried the buffing wheel but found that rubbing with bare hands produced the best heat/friction and gave a very hard semi gloss finish. Not cheap at \$21.99 for 500 mls but each coat only took two fingertips worth. It spreads even and smooth.



Compare this photo to the unfinished version in the above section of this newsletter.



KNIFE RIGHTS AT THE NASC SUMMIT IN BEND, NOVEMBER 2014

Again - as a general rule I keep religion and politics out of the newsletter, but I'll repeat a note about the proposed forging event at the National Association of Sportsmen's Caucuses (NASC) coming up this Fall.

NASC and the Congressional Sportsmen's Foundation lobby state and federal legislators on behalf of outdoor sports enthusiasts.

Knife Rights (<http://www.kniferights.org/>) lobbies and litigates for the right to own, use, and carry knives and edged tools.

At the April show Doug Ritter from Knife Rights noted that they are looking to set up a basic blade forging event for NASC Summit attendees. They will limit the number of legislators who participate in the forging event. They believe that a hands-on experience like this will give the lawmakers a direct connection with knife issues.

I believe that Knife Rights is still scouting for an appropriate venue for the forging event – either at the Sunriver summit or within easy commute distance. The tentative dates are November 19th or 20th.

If you wish to support the Knife Rights effort, please contact Doug Ritter at 602 476-2702 or dritter@KnifeRights.org



FREE DE-CLASSIFIEDS (IN NO PARTICULAR ORDER)

Email me a brief description of what you are selling/buying/looking for with your preferred contact (phone/email/...). Unless you let me know you want a shorter run, I'll run the note for 3 months and then send you an email to see if it's still valid.

For Sale: I have a surface grinder I would like to sell. it's a Boyar-Schultz Challenger Deluxe 2A, 6-18 hydraulic surface grinder with magnetic chuck, in great shape, works good. \$1000.00, call Lynn at 541-554-5294.

For Sale: I live in the Riddle Oregon area and have two large squirrel cage fans - I'd take \$25 each. They would work great for making forges. This is wildernessman Dan Hines saying keep the steel hot and making those hammer blows work good. wildernessman56@yahoo.com or by phone at 541-817-6215.



WEBSITE LINKS

5160 CLUB

5160 Club Newsletters are archived at:
<http://www.elementalforge.com/5160Club/>

Hint: to Google the archive for a specific knife style or presenter name, use a search like this:

sami site:<http://www.elementalforge.com/5160Club>
or this:

ron lake site:<http://www.elementalforge.com/5160Club>

FORUMS

Knifedog Forum

<http://knifedogs.com/forum.php>

Bladesmith's Forum aka Don Fogg Forum

<http://www.bladesmithsforum.com/>

American Bladesmith Society

<http://www.americanbladesmith.com/ipboard/>

Usual Suspects Network

<http://www.usualsuspect.net/forums/forum.php>

Blade Forums

<http://www.bladeforums.com/forums/forum.php>

REFERENCES

Many of the sites linked under “Knife Maker General” have book & video sections.

Our own Wayne Goddard's books are available at Amazon:

<http://www.amazon.com/Wayne-Goddard/e/B001JS9M10>

And you can email Wayne directly for his DVD at wgoddard44@comcast.net

Here's a few other useful references:

Verhoeven's Metallurgy For Bladesmiths PDF
<http://www.feine-klingen.de/PDFs/verhoeven.pdf>

Verhoeven's updated book:
<http://www.amazon.com/Steel-Metallurgy-Non-Metallurgist-J-Verhoeven/dp/0871708582>

ZKnives – Knife steel composition/comparison/etc.
<http://zknives.com/knives/steels>

Kevin Cashen's Bladesmithing Info
<http://www.cashenblades.com/info.html>

Tempil Basic Guide to Ferrous Metallurgy
http://www.tempil.com/wp-content/plugins/download-monitor/download.php?id=Basic_Guide_to_Ferrous_2010.pdf

GENERAL TOOLS & SUPPLIES

Woodcraft of Eugene – special thanks to Joe & the crew! 1052 Green Acres Rd Eugene, OR 97408 (Delta Oaks Shopping Center) 541 685-0677
<http://www.woodcraft.com/stores/store.aspx?id=515>

MSC Direct
<http://www.mscdirect.com/>

McMaster-Carr
<http://www.mcmaster.com>

Grainger
<http://www.grainger.com>

Surplus Center
<http://www.surpluscenter.com/>

Victor Machinery Exchange
<http://www.victornet.com/>

OREGON KNIFE MAKING CLASSES

Gene Martin offers personal instruction at his shop south of Grants Pass for a daily rate.
<http://www.customknife.com/>

Michael and Gabriel Bell offer a constant series of small group classes in Japanese style sword forging and fittings. Located on the southern Oregon Coast.
<http://dragonflyforge.com/>

Murray Carter offers small group classes in a variety of subjects, primarily focused on traditional Japanese cutlery. Located in Hillsboro.
<http://www.cartercutlery.com/bladesmithing-courses/>

KNIFE MAKER GENERAL

Knife kits, steel, tools, machines, supplies such as handle material, fasteners, belts, glues, finishes, etc.

Jantz Supply

<http://www.knifemaking.com>

Texas Knifemaker's Supply

<http://www.texasknife.com>

USA Knife Maker's Supply

<http://www.usaknifemaker.com/>

Knife and Gun (K&G)

<http://www.knifeandgun.com/>

Alpha Knife Supply

<http://www.alphaknifesupply.com/>

KNIFE STEEL SOURCES

New Jersey Steel Baron

<http://newjerseysteelbaron.com/>

Niagara Specialty Metals

<http://www.nsm-ny.com> (click Products/Knife Steels)

SB Specialty Metals

<http://sb-specialty-metals.com/products/knifesteels>

Bohler Uddeholm

<http://www.bucorp.com/knives.htm>

Pacific Machinery & Tool Steel – Portland, Oregon

<http://www.pmtsco.com/tool-die-steel.php>

2X72 BELT GRINDERS

Beaumont (KMG) – the industry standard

<http://www.beaumontmetalworks.com/shop/>

Travis Wuertz – premium brand, versatile machine

http://www.twuertz.com/Home_Page.php

Pheer – affordable, satisfied customers on the forums

<http://www.2x72beltgrinder.com>

AMK – affordable, quick-change between platen & contact wheel

<http://amktactical.com/>

Coote – affordable, reliable – you supply the motor

<http://www.cootebeltgrinder.com>

Grinder-In-A-Box – low cost – assembly required

http://www.polarbearforge.com/grinder_kit.html

Wayne Coe – grinders, motors, VFDs, etc.

<http://www.waynecoeartistblacksmith.com>

Contact Rubber Corp – wheels etc.

<http://contactrubber.com/contact-wheels.asp>

Sunray – drive wheels

<http://www.sunray-inc.com/drive-wheels/>

True Grit – grinder belts

<http://www.trugrit.com>

FORGE & REFRACTORY

Chile Forge

<http://www.chileforge.com/>

Mankel Forge

<http://mankelforge.com/forges.html>

High Temp Tools (scroll down the page for the category buttons)

<http://www.hightemptools.com/supplies-mainpage.html>

Omega – thermocouples & measuring equipment

<http://www.omega.com/>

Auber – more thermocouples and controllers, etc.

<http://www.auberins.com>

Hybridburners – home of the venturi T-Rex

<http://www.hybridburners.com/>

Pine Ridge Burners – for ribbon burners and all associated fittings, blowers, valves, etc.

<http://www.pineridgeburner.com>

Zoeller Forge – low cost venturi & parts: Z Burners

<http://zoellerforge.com/>

BLACKSMITH

Blacksmith Depot

<http://www.blacksmithsdepot.com>

Pieh Tool

<http://www.piehtoolco.com>

Centaur Forge

<http://www.centaurforge.com>

LOGO/ETCHING

Ernie Gropitch – Blue Lightning Stencil

<http://www.erniesknives.com/>

IMG International Marking Group

<http://img-electromark.com/>

Electro-Chem Etch

<http://www.ecemmi.com/products.html>

OTHER GOODIES

Sally Martin Mosaic Pins – So. Oregon

<http://customknife.com/index.php?cPath=13>

Burl Source – handle blocks/scales – So. Oregon

<http://www.burlsales.com/>

Gilmer Wood – N.W. Portland

<https://www.gilmerwood.com/>

Oregon Leather – 810 Conger Eugene and 110 N.W. 2ND Portland

<http://www.oregonleatherco.com/>

Coyote Steel – misc., scrap, copper, brass, bronze – Garfield & Cross St. Eugene

<http://www.coyotesteel.com>

Cherry City Metals – Salem, Oregon – metal recycling and useful objects

<http://www.cherrycitymetals.com/>

Amtek – tool steel & cutting tools

<http://websales.amtektool.com>

Rio Grande – jewelry tools/supplies

<http://www.riogrande.com>

Otto Frei – jewelry tools/supplies

<http://www.ottofrei.com>