

EUGENE 5160 CLUB ~ MAY 2017

<https://www.facebook.com/5160Club>

newsletter archive: <http://www.elementalforge.com/5160Club/>



MAY MEETING

May 4th – 6:00pm at David Thompson's shop. If you didn't get the directions in the meeting notice, email me for them: michael@elementalforge.com.

Bring your show-n-tell!

Request from the Thompsons:
“Please **drive very slowly** down our lane. The maintenance is all ours. Thanks.”



NOTES AND REMINDERS



There was no April meeting due to the OKCA knife show. Erik, Jim, and I had a great time at the 5160 Club table. The other guys sold stuff – I just bought wood blocks & grinder belts – and passed out dozens of 5160 Club info cards. Of course we all took turns roaming the show (talk about a candy store!) and spent time catching up with far flung friends.

Northwest Blacksmith Association – Spring Conference: May 12-14 Longview WA – Blacksmith Week: August 17-20 Government Camp on Mount Hood. See <http://blacksmith.org/events/> for all events.

California Blacksmith Association puts on a slew of events to the south of us. Check out their list: <http://calsmith.org/CBA-Events>

Portland Vintage & Custom Knife Show – October 28 & 29 – Portland Expo Center – for info check Chris Palmer's web site: <http://christinepalmer.net>

Bent River Forge aka Farrier Supplies – north of Monroe, OR has blacksmithing tools and supplies and ongoing intro to blacksmithing and other classes: <https://www.facebook.com/FarrierSuppliesOR/>

David Thompson – has coke and coal for sale (near Jerry's in Eugene, OR) – Talk to him at one of our meetings or call 541 688-2348.

New additions to the Website Links (at the bottom of the newsletter)...

- Under **Knifemaker Equipment** I've added Northridge Tool, a premium belt grinder maker: <http://www.northridgetool.com/>
- In **General Tools & Supplies** Frank recommends **Zoro** for some great deals: <https://www.zoro.com/>
- And I believe it was Jim who recommended **The Engineering Toolbox** for all your engineering formula and statistical needs (under **Other Goodies**): <http://www.engineeringtoolbox.com>



MARCH MEETING NOTES

I've been absorbed by a medical issue with my mom this week – so this newsletter is a little slap-dash. ~ ~ ~ your scribe Michael Kemp.

JIM JORDAN was up first – noting that he hadn't been doing a lot of engraving – then passed around a beautifully decorated Kershaw knife!



Jim praised the sharpening templates sold on Steve Lindsay's site (<http://www.lindsayengraving.com/>). He noted however that the templates are for 3/32" but Jim noted how he has re-purposed 1/8" to make a graver for \$2 rather than \$20, and adapted them with a brass sleeve to fit the sharpening templates.

At the simpler end of things – Jim passed around an example of how to hot-glue an engraving piece to a chunk of wood you can put in a standard vice – and simple hand engraving tools:



FRANK BOBBIO shared that he's been putting long hours in the shop "7 days a week working and making very little progress...". Frank was perfecting making small kitchen knives from the lumber mill bandsaw steel

that Dennis Ellingsen donated. Frank worked out a process for seating 0.070" x 0.350" x 2.5" stick tang into a wood handle block. Frank spent three weeks making his own blades for an oscillating tool to cut the tang slot into wood handle blocks – but was not satisfied with the results and went to a 0.070" bur.

Frank passed around several of his completed kitchen knives in the paring knife-to-fruit knife range. These are from Dennis's bandsaw steel. Frank does selective hardening to produce a very hard edge while maintaining a very tough spine to virtually eliminate the danger of breakage. Some were bead blasted and etched to reveal the temper line – others were finished with a scotch brite 220 belt. He noted that the scotch brite is easy to touch up if you scratch it when mounting the handle – while the bead blasting is problematic to clean up if scratched. Frank has set up to do his own stabilizing with cactus juice (<https://www.turntex.com>). The handles are made with woods that Frank has stabilized.



In answer to a question, Frank described how he socketed the stick tangs for these blades: the width of

the stick tang does not exceed 3/8” so he drilled a hole in the wood block “one size [0.020”] bigger”; split a 3/8” dowel on the bandsaw; fit a thin bolster onto the blade; sandwiched the blade between the dowel parts with glue – and glue on the outside of the dowel; put that in the hole in the handle block and let it set. Frank noted that he was using G-Flex and when he heats it to 100°F it becomes very runny and just putting the handle vertically in a vice and pressing the blade in got a nice tight fit.

Frank walked us through the cactus juice stabilizing process. He noted that the mixture does seem to start to eat through nitrile gloves, and over time will eat acrylic and poly-carbonate – so use glass or PVC equipment.

Frank noted that professional stabilizing like K&G is probably a little better, but for home stabilizing the cactus juice is pretty top-of-the-line.

There was a lot of discussion on pricing of handmade versus manufactured knives. Frank talked about the level of abuse he has engineered his paring knives to withstand – noting that the knife manufacturer Calphalon has issued a recall due to breakage. *The article I looked up said they are recalling 2,000,000 of their kitchen knives – after receiving 3,150 reports of knives breaking and 27 reports of consumers being cut from knife breakage.*

As another example of his home stabilizing, Frank passed around a couple of pieces of maple from a tree they'd had to cut down – died with a teal color (combining blue and green dyes).



Then Frank passed around a piece of oak from another tree they had to take down. Frank was questioning using oak as a handle material, but liked the color of this piece. A number of folks (*including me*) spoke up for oak. *I will say that it has pores that you may want to seal up.*



We spent most of an hour discussing heat treatments: normalizing/annealing/quenching/tempering. FWIW here's what I've gleaned on the subject:

http://elementalforge.com/tips_notes/?page_id=87

... and see Verhoeven's free PDF or book – or just about any of the links in the References section of the links at the bottom of the newsletter. And as a quick graphic reference for simple steel, it's hard to beat the Tempil chart: http://www.tempil.com/wp-content/plugins/download-monitor/download.php?id=Basic_Guide_to_Ferrous_2010.pdf

The question was raised whether it was necessary to normalize steel straight from the steel mill. Lynn shared that he and Wayne Goddard did some tests with 5160 steel where they hardened test pieces straight from the mill and the test pieces had huge grain size. That convinced Lynn that even if he is only doing stock removal (not heating the steel and forging it) to **always** do normalization cycles on his steel before hardening.

Frank relayed that in online forum photos of tests that other folks have done, the reduction in grain size in the first normalization is impressive, a second normalization reduces the grain still further, and a third normalization reduces the grain only slightly.

Also, there is a lot of ambiguity about how low to cool a steel when normalizing. Some folks cool to decalescence, or to black, or back to being magnetic (austenite is non-magnetic). Other folks cool it to room temperature.

This drifted into a lot of discussion about different folks' processes for making knives from old files.

Martin Brandt said he uses a weed burner to bring the sawmill bandsaw blade material up through all the tempering colors back to silver and that softens it up enough to cut blade blanks with a bandsaw.

*If you want to see Absolutely Awesome Heat Treat – A Chef Knife That Cuts Bolts Without Chipping, Bends 90 Degrees And **BOUNCES** Back To*

Zero – fire up this video clip of an interview with Bob Kramer and skip to the 2 minute mark:

<https://www.youtube.com/watch?v=-OCoS81G2CY>

I believe he uses three fairly simple steels in his Damascus – and salt pots for specific heat treat temperatures – and a quench tank with some sort of mechanical agitation.

To say that there was a lively discussion of a vast array of heat treating ideas exchanged would be putting it mildly.

MICHAEL KEMP (*that would be me*) took the floor at that point – saying that when I realized I had no new work that I wanted to share, I'd brought in a selection of books on knifemaking that folks might be interested in getting... from Verhoeven's college professor book on Metallurgy for Non Metallurgists to Hrisoulas's books, to Murray Carter, to Wayne Goddard, to a Blade Magazine book with several makers. I put them out for folks to look at and see if they might want to buy a copy for themselves.



There are lots of other knifemaking books available. If interested, check out the American Bladesmith Society web site or the various sites in the “Knife Maker General” links listed at the end of the newsletter.



At the end of the meeting **BROME** showed me this handy 1095 knife with Kydex sheath. Clay back hardened with a nice hamon.



If that's not an EDC (Every Day Carry) I don't know what is.

And that's a wrap for this issue of the 5160 Mostly Monthly Newsletter!



Have fun all – and work safe!

~ ~ ~ Michael Kemp



FREE DE-CLASSIFIEDS

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. No charge – just email me at Michael@ElementalForge.com

Lynn Moore is setting up a new shop and has these “extra” items from the old shop for sale:

Propane forge \$50

DeWalt 12” abrasive wheel chop saw \$40

Heavy duty vice \$25

Contact: beeblues26@msn.com or 541 554-5294

OKCA members: knifemaker items are often put up for sale in their classifieds – so remember to check their newsletters: <http://www.oregonknifeclub.org/>



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>

OREGON KNIFE COLLECTORS ASSOCIATION (OKCA)

The OKCA hosts monthly dinner meetings where you are guaranteed to see treasures from the wide world of “things that go cut!” OKCA also puts on the big knife show in April – if you haven't seen it you've been missing something special!

<http://www.oregonknifeclub.org/index.html>
Go to the “Knewsletter” link and scan a recent newsletter for a membership form and contact info.

FORUMS

Bladesmith's Forum aka Don Fogg Forum
<http://www.bladesmithsforum.com/>

Knifedogs Forum (USA Knifemaker)
<http://knifedogs.com/forum.php>

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>

Peter Newman of Bent River Forge/Farrier Supplies has a closed Facebook group for Oregon Blacksmiths
<https://www.facebook.com/groups/173156733117832>

Julious Griffith's knife groups on Facebook:

- Custom Knives For Sale by Maker - Available now
- Knifemaking - Works in Progress (w.i.p.'s)
- Knifemaking Equipment Buy, Sell, or Trade (used only)
- Knifemaking - Masters to paying Students connection
- Knife shop photos
- Knife Calendar - Events, shows, hammer-ins, schools, misc.

These are all closed groups – to keep them focused – so if you want to join one of the groups, click the “+ Join Group” button and also message Julious and give him some info on yourself so he knows you have real interest in the group.

REFERENCES

Our own Wayne Goddard's books are available at Amazon:
<http://www.amazon.com/Wayne-Goddard/e/B001JS9M10>
And you can email the Goddards directly for his DVD at wgoddard44@comcast.net

Most of the companies in the “Knife Maker General” links (below) have a section for how-to books and DVDs.

Verhoeven's Metallurgy For Bladesmiths PDF – this is a very deep dive, not an introduction.
<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

From the Heat Treating Society of the ASM – the Heat Treater's Guide Companion for Android devices. Look up heat treating details on hundreds of steels in the palm of your hand.
<https://play.google.com/store/apps/details?id=com.pfiks.mobile.heattreaters&hl=en>

My “Knife Info” has some knife musings and cheat sheet charts – plus Oregon and Eugene knife laws:
http://elementalforge.com/tips_notes/

CLASSES FOR KNIFE MAKING, ETC.

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

Michael and Gabriel Bell of Dragonfly Forge offer an ongoing 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, Oregon.
<http://www.cartercutlery.com/bladesmithing-courses/>

David Lisch is an ABS Master Smith who has taught classes in Washington. He recently moved his shop and has not restarted classes yet – keep an eye out on this page:
<http://www.davidlisch.com/Learn.html>

Jim Hrisoulas now offers both formal classes and mentoring sessions in 2 hour blocks at his shop in Henderson, Nevada:
<http://www.atar.com/joomla/> and click the “Bladesmithing Classes” link.

The ABS (American Bladesmith Society) offers classes in Washington, Arkansas and elsewhere – if you are up for traveling across the country to take classes, check out their “Schools” link:
<http://www.americanbladesmith.com/>

James Austin offers forging classes in Oakland, CA – axes, tongs, viking anvil, etc.:
http://forgedaxes.com/?page_id=148

Blacksmithing classes at Farrier Supplies aka Bent River Forge
26729 99W, Monroe, Oregon
Coal, coke, forges, parts, tools, classes...
<https://www.facebook.com/FarrierSuppliesOR>
(541) 847-5854

Blacksmithing and some bladesmithing workshops are hosted regularly by the Northwest Blacksmith Association: <http://blacksmith.org/>

USA Knifemaker has a lot of fun & informative videos on their YouTube channel:
<https://www.youtube.com/user/USAKnifemaker/videos>
... and hey - “free” is a hard price to beat!

Nick Wheeler also has a good YouTube channel with a lot of how-to videos:
<https://www.youtube.com/user/NickWheeler33/videos>

GENERAL TOOLS & SUPPLIES

Woodcraft of Eugene – thanks to Joe & the crew for six years of hosting 5160 Club meetings – we've had to move on, but the hospitality was appreciated.
<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/>

Zoro
<https://www.zoro.com/>

KNIFE MAKER GENERAL

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

Jantz Supply – Davis, OK
<http://www.knifemaking.com>

Texas Knifemaker's Supply – Houston, TX
<http://www.texasknife.com>

USA Knife Maker's Supply – Mankato, MN
<http://www.usaknifemaker.com/>

Knife and Gun (K&G) – Lakeside, AZ
<http://www.knifeandgun.com/>

Alpha Knife Supply – ?Everett, WA?
<http://www.alphaknifesupply.com/>

True Grit – Ontario, CA
<http://www.trugrit.com>

Especially Abrasives – lower cost 2x72 belts
<http://www.especiallyabrasives.com/>

KNIFE STEEL SOURCES

New Jersey Steel Baron
<http://newjerseysteelbaron.com/>

Kelly Cupples (High Temp Tools) – Alabama
<http://www.hightemptools.com/steel.html>

Niagara Specialty Metals – New York
<http://www.nsm-ny.com> (click Products/Knife Steels)

SB Specialty Metals – New York & Texas
<http://shop.sbsm.com/>

Bohler Uddeholm – numerous U.S. locations
<http://www.bucorp.com/knives.htm>

Sandvic – stainless steels – Texas & Pennsylvania
<http://www.smt.sandvik.com/en/products/strip-steel/strip-products/knife-steel/sandvik-knife-steels/>

Pacific Machinery & Tool Steel – Portland, Oregon
<http://www.pmtsco.com/tool-die-steel.php>

KNIFEMAKER EQUIPMENT

Beaumont (KMG) [Ohio] – the industry-benchmark 2x72 belt grinder
<http://www.beaumontmetalworks.com/shop/>

Travis Wuertz [Arizona] – premium versatile grinder
http://www.twuertz.com/Home_Page.php

Pheer [Gresham, Oregon] – affordable grinder made in Oregon
<http://www.2x72beltgrinder.com>

AMK [Ohio] – affordable grinder, quick-change between platen & contact wheel
<http://amktactical.com/>

Northridge Tool [Ohio] – precision manufactured belt grinders <http://www.northridgetool.com/>

Coote [Port Ludlow, Washington] – affordable, simple grinder – you supply the motor
<http://www.cootebeltgrinder.com>

Marinus Kuyl [Hillsboro, Oregon] – another affordable grinder made in Oregon – and parts – you provide the motor.
<http://oregonblademaker.com>

Grinder-In-A-Box – grinder kit, assembly required
http://www.polarbearforge.com/grinder_kit_order.html

The “No Weld Grinder” plans can be purchased from
<http://usaknifemaker.com>
either as a booklet or as a download – just use the search
box to enter “no weld grinder”

Wayne Coe [Tennessee] – grinders, motors, VFDs...
<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/>

Renaissance Metal Art [Mulino, Oregon] – 80# ram
air hammer
<http://www.rmetalart.com/tools.htm>

Anyang [Texas] – air hammers from 20# to 165#
<http://www.anyangusa.net/>

Meyer Machine Tool [Ohio] – treadle hammer
<http://www.meyermachinetool.com/Blacksmith-div-.html>

Spencer/Clontz tire hammer plans/workshops
http://www.alaforge.org/Trading_Post.html

Appalachian Power Hammer plans
<http://www.appaltnet.net/rusty/index.htm>

Helve Hammer and Quick-Change Dies Video –
from a BladesmithsForum.com thread.
<https://www.youtube.com/watch?v=uzruqYkKGNM>

True Grit – under “Machines & Accessories”
<http://www.trugrit.com>

FORGE & REFRACTORY

Chile Forge
San Marcos, Texas
<http://www.chileforge.com/>

Mankel Forge – Muskegon, Michigan
<http://mankelforge.com/forges.html>

Western Industrial Ceramics Inc.
All things refractory – Tualatin, Oregon
<http://www.wicinc.com/>
High Temp Tools (scroll down the page for the
category buttons) Tuscaloosa, Alabama
<http://www.hightemptools.com/supplies-mainpage.html>

High Temp Inc. has also been recommended for
Kaowool etc. Portland, Oregon
<http://hightempinc.net/>

Omega – thermocouples & measuring equipment
Stamford, Connecticut
<http://www.omega.com/>

Auber – more thermocouples and controllers, etc.
Alpharetta, Georgia
<http://www.auberins.com>

Hybridburners – home of the venturi T-Rex
Smithville, Georgia
<http://www.hybridburners.com/>

Pine Ridge Burners – for ribbon burners and all
associated fittings, blowers, valves, etc.
Conway, Massachusetts
<http://www.pineridgeburner.com>

Zoeller Forge – low cost venturi & parts: Z Burners
Lanesville, Indiana
<http://zoellerforge.com/>

Here's the original article on making a ribbon burners
that John Emmerling wrote back in 2005 for the
NWBA Newsletter:
<http://blacksmith.org/2005-1-hot-iron-news/>
You can download the PDF from that site. John's
article starts on page 11.

BLACKSMITH

Farrier Supplies
26729 99W, Monroe, Oregon
Coal, coke, forges, parts, tools, classes...
<https://www.facebook.com/FarrierSuppliesOR>
(541) 847-5854

Blacksmith Depot
<http://www.blacksmithsdepot.com>

Pieh Tool
<http://www.piehtoolco.com>

Centaur Forge
<http://www.centaurforge.com>

Quick and Dirty Tool Co.
<http://quickanddirtytools.com/>

LOGO/ETCHING

Ernie Gropitch – Blue Lightening Stencil
<http://www.erniesknives.com/>

IMG International Marking Group
<http://img-electromark.com/>

Electro-Chem Etch
<http://www.ecemmi.com/products.html>

HEAT TREAT SERVICES

Here are some folks who provide heat treating services for blades. While all of these have been recommended by one reputable person or another I have not had experience with them. If you use one, let us know how it went!

Paul Bos Heat Treating at Buck Knives. Paul Bos has retired and handed the torch to Paul Farner. Highly reputable. Post Falls, Idaho:
<http://www.buckknives.com/about-knives/heat-treating/>

Peters Heat Treating is another highly reputable operation. Meadville, Pennsylvania:
<http://www.petersheattreat.com/cutlery.html>

Texas Knifemaker's Supply offers heat treat services. Houston, Texas:
<http://www.texasknife.com/vcom/privacy.php#services>

Tru-Grit provides heat treat services. Ontario, California: https://trugrit.com/index.php?main_page=index&cPath=34

K&G also provides heat treat services but I can't find a reference on their web site – you'll have to contact them for details. Lakeside, Arizona:
<http://www.knifeandgun.com/default.asp>

Byington Blades heat treat service is in Santa Clara, California: <http://www.byingtonblades.com/>

It's my understanding that Chris Reeve Knives uses ACE Co in Boise Idaho – which is enough for me to add them to the list:
<http://www.aceco.com/heattreat/index.html>

WOOD SUPPLIERS

Burl Source – handle blocks/scales – So. Oregon
<http://www.burlsales.com/>

Shelton Pacific – stabilized wood – Shelton, WA
<http://stores.sheltonpacific.com/>

Gilmer Wood – N.W. Portland
<https://www.gilmerwood.com/>

North Woods Figured Wood – Gaston, OR
<http://www.nwfiguredwoods.com/>

WOOD STABILIZING

K&G (Knife and Gun) – Lakeside, AZ
Good reputation with everybody.
<http://www.kandgstabilizing.com>

Gallery Hardwoods – Eugene, OR
I've purchased stabilized blocks from them at the April show. They tend to be heavier, presumably more durable/stable but less wood-feel than others.
<http://www.galleryhardwoods.com/stabilized.htm>

WSSI (Wood Stabilizing Specialists International, Inc.) – Ionia, IA – some folks have had issues with

them, some folks are totally happy.

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

Alpha Knife Supply – Everett, WA?

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

Turn Tex Woodworks – San Marcos, TX

“Cactus Juice” and pressure chambers etc. for the do-it-yourself folks – your mileage may vary.

<https://www.turntex.com>

OTHER GOODIES

Sally Martin Mosaic Pins – So. Oregon

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

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

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

Coyote Steel – wide variety of new steel, 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>

M3 Composite – space age mokume & other

<http://www.m3composite.com/>

Voodoo Resins – striking resin handle material

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

Minarik automation & control

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

The Engineering Toolbox (formula & info reference)

<http://www.engineeringtoolbox.com>

Valley Stainless (that does water-jet cutting) is one of Craig Morgan's customers. They told Craig “bring in a pattern” and they'd work with you on small batch cutting. They don't have a website yet. 29884 E Enid Rd, Eugene, Oregon 97402 (541) 686-4600.