#### THE MOSTLY MONTHLY NEWSLETTER OF THE

# EUGENE 5160 CLUB ~ JANUARY 2021 <

https://www.facebook.com/5160ClubTheGroup

newsletter archive: <a href="http://www.elementalforge.com/5160Club/">http://www.elementalforge.com/5160Club/</a>



#### 5160 CLUB ZOOM MEETING

#### JANUARY 7THD 6PM

Same setup as all the recent meetings. Thanks **Edward!** 

Here's the Zoom download site: <a href="https://zoom.us/download#client\_4meeting">https://zoom.us/download#client\_4meeting</a>

You do not need to create a "Zoom account" to participate in the meeting.

The recurring "join meeting" link is: <a href="https://uoregon.zoom.us/j/96183250858?">https://uoregon.zoom.us/j/96183250858?</a> pwd=blpkOTIVMXdINIV0YW4wb2NRRjBMZz09

If that link doesn't work for you, the meeting ID is: 961 8325 0858 and the passcode is: 098053

Think about what you want to share in the meeting and how to position your phone/tablet/computer/web cam to show your stuff!

And remember Facebook "5160 Club – The Group": <a href="https://www.facebook.com/groups/5160ClubTheGroup/">https://www.facebook.com/groups/5160ClubTheGroup/</a> is a place to share your questions, insights, or photos.



The Eugene 5160 Club newsletter is for information only. Do not try anything mentioned here without hands-on training. Neither the folks mentioned in the newsletters nor the newsletter scribe are responsible for your actions or liable for any repercussions. If you are good with that: read on!



#### **DECEMBER ZOOM MEETING**

Edward Davis got the meeting going by showing two chef knives that have been on the bench for awhile but are recently completed. These chef knives have a 400 grit finish on the blade. Black Micarta sanded to 1200 grit (made possible by his variable speed grinder at about 30%) – then put a buffing wheel on the drill press with red compound for the finish. "They warned me that if I used the white compound on the black Micarta it would end up getting embedded and you would never get it out."



One has the last of Edward's home-made mosaic pins in it. Hard to see here, but nicely done!



Frank Bobbio mentioned a light pink "scratch-less" compound for softer materials, even Plexiglas, that he uses on Micarta.

Lynn Moore mentioned that he recently purchased some compound locally at Woodcraft. He got some Tripoli and carnauba wax. He keeps one buffing wheel charged with the Tripoli and another charged with carnauba wax – polishes with the Tripoli and shines it up with the carnauba wax. "Puts a real nice shine on 'em."

Edward solicited advice on knife edge treatments to get the best shaving-sharp edge all along the blade.

Brome mentioned checking the thickness of the blade leading up to the edge – either with a micrometer or by making a thin cut in a piece of wood, then running the length of the blade through the cut to see where it might bind up – indicating a thicker area.

For the edge test he mentioned using a Bic pen or your fingernail to set the edge into then pull across the length of the edge to see if there's a spot where the edge catches (on plastic or keratin).

Edward noted that he doesn't use the whole handle on a knife like this. He chokes up on it an does a "pinch grip" or "point grip", but likes the extra handle length for moving the knife's balance point to the blade/handle junction.

**Frank Bobbio** was up next, saying he's mainly been doing steak turners and other Etsy products, but had just finished up a knife before the meeting. This is his first handle in this style. "I used a Dremel... with a 60 grit then 120 then 1200 grit, then buffed with that plastic *[scratch-less]* compound."



Frank then dropped back to something Edward has said about felt facing for the grinder platen. This is used to add a little give to the belt when grinding. Frank showed several examples of material to put on the platen; some felt from Home Depot meant to be put under furniture. "It's pretty stiff. It's synthetic, but I've never had a problem with it melting..." Then he mentioned getting some felt from Zoro.com that comes in 2" wide strips. He got some in 1/4" and

3/8" in a couple of different densities. He noted that the thicker pieces have more give to them than he likes, so he recommends starting with a thin, stiff, felt if you give it a try.

Your experience may vary, but for Frank the 3/8" thickness – even with a very dense/hard felt – is softer than he wants, making more of a convex grind than he is looking for.

There are lots of ways to attach felt or other jigs to your platen. Frank has used Shoe Goo, but prefers Arleene's Super Fabric Adhesive from a craft store. It acts like a thinned down version of Shoe Goo. "I think it's the strongest flexible adhesive – that and Shoe Goo."



Frank also mentioned that you can get the graphite platen tape from True Grit and glue that on top of the felt to stiffen it up (if needed), and to protect the felt.

Frank praised going from (for example) a 240 grit on straight metal platen belt to 400 with the felt backing for being able to feather in your grind lines.

Frank uses the Arleene's adhesive to glue metal clips on the top and sides of his platen felts for quick on-and-off.



Brome McCreary does a similar thing but makes a platen sleeve



from sheet metal and uses DAP contact cement to stick the felt onto the sheet metal.



The same technique could be used with a radiused platen attachment, or any platen attachment.

Frank also showed off a 6 pack of very thin low cost 4' LED shop lights. If you search Amazon for "6 pack LED shop light 4ft

on/off" you will find a selection of options – some less than \$40.

Lynn asked Frank about set of press dies that were in the Zoom background. It looks like the top die is free to tilt on its bolt so that it can adjust to a beveled work piece. Frank uses this setup to straighten his steak turners after putting the twist in them. He also uses the same setup for plate quenching. He will chill the blocks in the freezer to get the fastest quench. He's used that setup on 51N20 (an oil quench steel) and gotten full hardness.



Brome McCreary showed a froe that he found when cleaning up behind the woodshed on the family farm. A froe was used to split roofing shakes out cedar rounds. It sounded like Brome had some mixed memories of splitting shakes as a kid, but enough of them must have been good because he's cleaned it all up and is putting a new handle on it.

He is making an ash handle from a center spire piece from the farm. It's been drying for a year in a damper part of his shop. He's shaped it with a draw knife, spoke shave, hand plane, and a scraper. He will set



the handle aside to dry more in the drier part of his shop for a few months before final fitting.

Among the wood shaping tools he mentioned, the scraper is pretty uncommon these days. Sandpaper mostly took over the job of finishing a wooden surface. It's cutting edge is just the "burr" or wire edge that you get when you put a fresh edge on a chisel. The burr becomes the cutting tool. Brome says to make a scraper from a tool steel like O-1 or A-2. "Those old techniques of woodworking are kind of fun – when you've got the time."

Scribe's note: the only folks I've known that would regularly use a scraper were musical instrument makers (aka luthiers) and my dad when he took up furniture making after he retired. And now I'll add Brome to that list!

Martin Brandt joined us (audio only) to share his buffing compound experience – from both knife making and from jewelry making. He recommended using darker polishing compounds (like Tripoli) on dark handle materials and lighter compounds on lighter handle materials.

As for attaching his felt to the platen he's just had a hook on the top, and the felt can wander side-to-side so the side tabs are on his add-to-the-felt list. He also noted that with a felt pad you have to be careful not to let it round over edges that you want to keep – like a crisp corner on the spine of the blade.

He noted that his recent shoulder surgery has got his arm sidelined for awhile. He and Rochelle compared shoulder surgeries. I think Rochelle had the more impressive surgery. "I'm looking at up to another year to get back whatever I'm going to get back."

So cautionary tale: be gentle to your shoulders and rotor cups!

**Billy O** has been working on some knives, some jigs, and some tooling. He's been working on his waterfall Damascus series "now I've got 7 blades that are waiting for handles to be put on."

Here's the 4 that are heat treated and waiting for handles. He has 3 more waiting for heat treat.





He also has made some quench/straightening plates out of 1-1/2 x 4 x 12 inch aluminum bar stock. He will experiment with plate quenching his Damascus. He bought a Harbor Freight bench vice which he fitted with bolts and springs to spring-load the plates so that they can adjust to any taper in a blade being straightened or plate quenched.

Aaaand he made some quick-change dies for the press. Here's the top and bottom die-holders:





Here's the squaring dies in place in the press:



He's made a couple more dies so far (but no pictures).

... there was general discussion about the design of friction folders and other folding knife designs.

Brome showed an example of a Masonite mock-up that he does to get the geometry right before using up steel and handle material. He mentioned that Home Depot often has broken sheets that they will sell for a buck. I've seen Erik Land's Plexiglas or acrylic prototypes done in the same way – that have the advantage of letting you see through the whole thing.



Frank mentioned that he also uses acrylic for his mock-ups. Brome noted that he gets free acrylic off-cuts from window and glass shops.

That reminded me that when I was looking for a chunk of polished granite to do leather tooling against I got a free piece from a local shop that does countertops. It was a sink cut-out. Perfect.

There was some discussion about hand sanding versus doing it all with power tools. Which led to the reminder that you want to keep control of the blade at all times. If you are using a wheel, keep the blade below the centerline and don't let a buffing wheel grab any point or corner. And if hand sanding keep the blade over the workbench -or- if clamped where the edge or point are sticking out, cut the profile in a thin plank or some such and clamp the two together to avoid slicing or stabbing something you don't want sliced or stabbed.

Brome "stepped" back in to show a madrona knife burl knife handle he has in the works. "I hope this one will be a personal carry..." He sized it down from a longer version to get a better EDC length. "This is my favorite shape, and madrona is my favorite tree. I got this burl from Chuck Richards – Woodchuck Forge – because I have a lot of madrona but I don't have anything with this nice burl pattern in it."



Martin relayed how he'd scored some madrona burl from Craig's List. He coated it with a wax mix to slow the drying, but in a month "it was just exploding, to where it was looking like expanded metal." Martin has had luck with boiling such woods for about an hour per inch thickness to relieve the stresses in the wood. There followed quite a few stories on wood curing adventures.

Rafi talked about his ribbon burner issues – number of holes, size of holes, PSI, etc. So there was some discussion about hole spacing, how well the refractory casting will hold up between holes, etc. There was suggestion of putting hardware cloth in the casting, like rebar is used in concrete. It was suggested that he soak the hardware cloth in vinegar overnight and wire brush the zinc galvanizing off before casting it.

The zinc fumes released at high temperatures are noxious, and can cause serious damage, so zinc and forges are a bad mix.





Rafi then showed us his latest knife. The chef knife is made from industrial bandsaw blade, with black walnut for the handle scales. The blade profile is from another kitchen knife. His design for the handle, with contoured profile and rounded front end got compliments from the others in the meeting.



There was quite a discussion about the chef's "pinch grip" and how that is similar to the traditional hold that the Gurkha use on their blades. And similar to the hold that folks clearing brush in Africa, Central America, and South America use. Brome and Martin both praised using a whip motion at the end of the arc for easier brush cutting. Brome also recommended using a hook in one hand and the machete in the other – using the hook to capture and control the brush.

**Lynn Moore** showed a machete with a horse-mat handle. "It's pretty light, maybe 3/16 thick. I really like the handle. I've used it for chopping blackberries and ivy. I've had this thing for so many years, I don't remember what the steel is."



Then Lynn showed us a work in process. It's an EDC knife made from bearing race. The handle is ironwood.



Lynn has been taking advantage of a lot of the digital demos this year. He bought this cheese slicer from a

recent demo as a fund-raiser for NWBA. There's a marble in the end of the handle that doesn't show very well in this video screen shot.





Then he made one of his own!

Lynn recommended the NWBA YouTube collection of 20-some demos.

Next he showed his progress on the bone-handle knife that he showed us last month. It's a

mystery bone he found while mushroom hunting last year. Edward was able to identify it as either an elk

or a cow based on the shape, and probably elk. And as a iuvenile by the fact that the



"knuckles" on the end of the bone have fallen off, meaning the growth plate between them and the bone proper had not hardened up yet.

Folks compared notes on chanterelle hunting, job sites during the pandemic, and exercising your dog in the time of COVID.

That wrapped it up for the meeting.



Have fun, keep well, and work safe – and see you in the Zoom-verse!

Your Scribe ~ Michael Kemp



## WEBSITE LINKS **5160 CLUB**

Check out Facebook "5160 Club - The Group": https://www.facebook.com/groups/5160ClubTheGroup/ as a place to share your questions, insights, and photos.

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

## **OREGON KNIFE COLLECTORS** ASSOCIATION (OKCA)

The OKCA is putting out their newsletter, but the monthly dinner meetings and the December show are COVID canceled. The big knife show in April might happen – sign up for their newsletter to stay in the loop: http://www.oregonknifeclub.org/index.html Go to the "Knewslettter" link and scan a recent newsletter for a membership form and contact info.

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#### **FORUMS**

Lambowie – Check out this new on-line marketplace. It's billed as a low-overhead alternative to eBay for forged knives, swords, etc. as well as bladesmithing equipment and materials. If you have feedback on this site – let me know! <a href="https://lambowie.com">https://lambowie.com</a>

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

Knifedogs Forum (USA Knifemaker) <a href="https://knifedogs.com/">https://knifedogs.com/</a>

American Bladesmith Society <a href="http://www.americanbladesmith.com/ipboard/">http://www.americanbladesmith.com/ipboard/</a>

Usual Suspects Network <a href="http://www.usualsuspect.net/forums/forum.php">http://www.usualsuspect.net/forums/forum.php</a>

Blade Forums <a href="http://www.bladeforums.com/">http://www.bladeforums.com/</a>

Hype-Free Blades <a href="http://www.hypefreeblades.com/forum">http://www.hypefreeblades.com/forum</a>

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

#### **REFERENCES**

Wayne Goddard's books are available at Amazon: <a href="http://www.amazon.com/Wayne-Goddard/e/B001JS9M10">http://www.amazon.com/Wayne-Goddard/e/B001JS9M10</a>
And you can email the Goddards directly for his DVD at Sg2goddard@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. I no longer see the original free PDF – but here's the updated book on Amazon:

http://www.amazon.com/Steel-Metallurgy-Non-Metallurgist-J-Verhoeven/dp/0871708582

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

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

Knife Steel Nerds – a metallurgist's blog on the technical details of steel <a href="https://knifesteelnerds.com">https://knifesteelnerds.com</a>

Tempil Basic Guide to Ferrous Metallurgy <a href="http://es.tempil.com/assets/5/31/Basic\_guide\_to\_ferrous\_metallurgy\_(2).pdf">http://es.tempil.com/assets/5/31/Basic\_guide\_to\_ferrous\_metallurgy\_(2).pdf</a>

From the Heat Treating Society of the ASM – the Heat Treater's Guide Companion for Android devices.

https://play.google.com/store/apps/details? id=com.pfiks.mobile.heattreaters&hl=en

My own "Knife Info" has musings and cheat sheet charts – plus Oregon and Eugene knife laws: <a href="http://elementalforge.com/tips">http://elementalforge.com/tips</a> notes/

#### CLASSES FOR KNIFE MAKING, ETC.

Erik Olson is teaching intro to forged knives in Eugene. I don't have a business contact but his personal Facebook page is:

https://www.facebook.com/erik.olson.77715

Farrier Supplies aka Bent River Forge offers intro and advanced blacksmithing classes – and supplies. 26729 99W, Monroe, Oregon Coal, coke, forges, parts, tools, classes... <a href="https://www.facebook.com/FarrierSuppliesOR">https://www.facebook.com/FarrierSuppliesOR</a> (541) 847-5854

Anvil Academy in Newberg has various classes now including a knifemaking class:

http://anvilacademy.info/schedule/

http://newbergdowntown.org/whats-happening/knife-making-class/

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

Bear Iron in Cottage Grove offers blacksmith classes through Lane Community College. https://www.beablacksmith.com/sign-up

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/

White Hart Forge offers intro to blacksmithing classes plus some advanced classes and some intro to knife making classes. Oak Grove, Oregon (just south of Portland). <a href="https://whitehartforge.com/classes/">https://whitehartforge.com/classes/</a>

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

David Lisch is an ABS Master Smith who teaches classes in Washington. http://www.davidlisch.com/

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: <a href="http://www.americanbladesmith.com/">http://www.americanbladesmith.com/</a>

James Austin offers forging classes in Oakland, CA – axes, tongs, viking anvil, etc.: <a href="http://forgedaxes.com/?page\_id=148">http://forgedaxes.com/?page\_id=148</a>

Keep an eye out on California Blacksmith Association for workshops and events: <a href="http://calsmith.org/CBA-Events">http://calsmith.org/CBA-Events</a>

USA Knifemaker has a lot of fun & informative videos on their YouTube channel: <a href="https://www.youtube.com/user/USAKnifemaker/videos">https://www.youtube.com/user/USAKnifemaker/videos</a> ... 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**

Zoro

https://www.zoro.com/

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 <a href="http://www.victornet.com/">http://www.victornet.com/</a>

Widget Supply - Dremel tools, needle files, craft knives, drill bits, etc – Albany, Oregon. <a href="https://widgetsupply.com">https://widgetsupply.com</a>

And of course there are the local hardware stores like Jerry's, and chains like Harbor Freight and Woodcraft.

#### KNIFE MAKER GENERAL

Lambowie – a low-overhead eBay alternative for custom knives and knifemaking equipment. https://lambowie.com

Jantz Supply – Davis, OK <a href="http://www.knifemaking.com">http://www.knifemaking.com</a>

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

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

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

Alpha Knife Supply – Cedar City, UT http://www.alphaknifesupply.com/

True Grit – Ontario, CA <a href="http://www.trugrit.com">http://www.trugrit.com</a>

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

#### STEEL SOURCES

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

Coyote Steel – wide variety of new steel, scrap, copper, brass, bronze – Garfield & Cross St. Eugene <a href="http://www.coyotesteel.com">http://www.coyotesteel.com</a>

Martin Brandt – 5160 Club member in Springfield who always has some knife steel and supplies on hand. 541 954-2168

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

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

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

Sandvic – stainless steels – Texas & Pennsylvania <a href="https://www.materials.sandvik/en-us/products/strip-steel/strip-products/knife-steel/sandvik-knife-steels/">https://www.materials.sandvik/en-us/products/strip-steel/strip-products/knife-steels/</a>

Burcham's Metals – Albany, Oregon – recycled metal of all sorts. Very good pricing. http://www.burchamsmetals.com

Cherry City Metals – Salem, Oregon – metal recycling and useful objects <a href="http://www.cherrycitymetals.com/">http://www.cherrycitymetals.com/</a>

Swift & McCormick Metal Processors Inc. 3192 NE Sedgwick, Terrebonne, Oregon 541 548 4448

Everything from big chunks of steel to railroad spikes. Very good prices. They can torch-cut big pieces down for a small fee.

Amtek – tool steel & cutting tools <a href="http://www.amteksteel.com/index.html">http://www.amteksteel.com/index.html</a>

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

Alpha Knife Supply – Cedar City, UT <a href="http://www.alphaknifesupply.com/">http://www.alphaknifesupply.com/</a>

### **KNIFEMAKER EQUIPMENT**

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

Origin Blade Maker – aka Oregon Blade Maker [Portland, Oregon] – affordable chassis and accessories, good reputation – with or w/out motor <a href="https://originblademaker.com">https://originblademaker.com</a>

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 <a href="http://www.cootebeltgrinder.com">http://www.cootebeltgrinder.com</a>

Marinus Kuyl [Hillsboro, Oregon] – another affordable grinder made in Oregon – and parts – you provide the motor.

https://originblademaker.com/

Broadbeck Ironworks LLC – [Maryland I think] – Grinders, attachments, belts, leather sewing machines <a href="https://www.brodbeckironworks.com/attachments">https://www.brodbeckironworks.com/attachments</a>

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

Travis Wuertz [Arizona] – premium versatile grinder <a href="http://www.twuertz.com/Home\_Page.php">http://www.twuertz.com/Home\_Page.php</a>

Grinder-In-A-Box – grinder kit, assembly required <a href="http://www.polarbearforge.com/grinder\_kit\_order.html">http://www.polarbearforge.com/grinder\_kit\_order.html</a>

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

Wayne Coe [Tennessee] – grinders, motors, VFDs... <a href="http://www.waynecoeartistblacksmith.com">http://www.waynecoeartistblacksmith.com</a>

Contact Rubber Corp – wheels etc. <a href="http://contactrubber.com/contact-wheels.asp">http://contactrubber.com/contact-wheels.asp</a>

Sunray – drive wheels <a href="https://www.sunray-inc.com/products/wheels/">https://www.sunray-inc.com/products/wheels/</a>

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

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

Spencer/Clontz tire hammer plans/workshops <a href="http://www.alaforge.org/Trading\_Post.html">http://www.alaforge.org/Trading\_Post.html</a>

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

True Grit – under "All Products"/"Machines & Accessories"
<a href="http://www.trugrit.com">http://www.trugrit.com</a>

#### **FORGE & REFRACTORY**

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

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

Mathewson Metals – forges, burners, anvils... Tacoma Washington <a href="https://mathewsonmetals.com">https://mathewsonmetals.com</a> 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 <a href="http://www.hightemptools.com/supplies-mainpage.html">http://www.hightemptools.com/supplies-mainpage.html</a>

High Temp Inc. for Kaowool, castable refractory, fire brick up to 2,600°f, etc. Portland, Oregon <a href="http://hightempinc.net/">http://hightempinc.net/</a>

Omega – thermocouples & measuring equipment Stamford, Connecticut https://www.omega.com/en-us/

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

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

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

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

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

Blacksmith Depot <a href="http://www.blacksmithsdepot.com">http://www.blacksmithsdepot.com</a>

Pieh Tool http://www.piehtoolco.com

Centaur Forge <a href="http://www.centaurforge.com">http://www.centaurforge.com</a>

Quick and Dirty Tool Co. <a href="http://quickanddirtytools.com/">http://quickanddirtytools.com/</a>

#### LOGO/ETCHING/STAMPS

Ernie Grospitch – Blue Lightening Stencil <a href="http://www.erniesknives.com/">http://www.erniesknives.com/</a>

IMG International Marking Group <a href="http://img-electromark.com/">http://img-electromark.com/</a>

Marking Methods, Inc. <a href="http://www.markingmethods.com">http://www.markingmethods.com</a>

Electro-Chem Etch <a href="http://www.ecemmi.com/products.html">http://www.ecemmi.com/products.html</a>

Steel Stamp, Inc. www.steelstampsinc.com

LectroEtch – Ohio <a href="https://lectroetch.com/">https://lectroetch.com/</a>

## **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/?s=cutlery

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: <a href="https://trugrit.com/index.php?">https://trugrit.com/index.php?</a> 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: <a href="http://www.knifeandgun.com/default.asp">http://www.knifeandgun.com/default.asp</a>

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

#### **WOOD & HANDLE MATERIAL**

Burl Source – handle blocks/scales – So. Oregon <a href="http://burlsource.us/">http://burlsource.us/</a> <a href="https://www.facebook.com/BurlSource/">https://www.facebook.com/BurlSource/</a>

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

Gilmer Wood – N.W. Portland <a href="https://www.gilmerwood.com/">https://www.gilmerwood.com/</a>

Bamboo Oasis – wide variety of bamboo – Beaverton, OR phone 503-703-1345 https://bamboooasis.com/

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

Atlas Billiard Supplies – Wheeling, IL – cue blanks of Micarta and exotic woods – with some sizes suitable for knife handles. <a href="http://www.cuestik.com/">http://www.cuestik.com/</a>

For Eugene area boards, planks, etc. there's:

Crosscut Hardwoods at 2344 W 7<sup>th</sup>, Eugene http://www.crosscuteugene.com/

Tree Products Hardwoods at 150 Seneca, Eugene <a href="http://treeproductshardwood.com/">http://treeproductshardwood.com/</a>

Northwest Timber has larger pieces of figured wood. In Jefferson Oregon between Albany and Salem. <a href="https://nwtimber.com/">https://nwtimber.com/</a>

and it doesn't hurt to check Mike's Bargain Center on Hwy 99 just south of Beltline, Eugene <a href="https://www.facebook.com/MikesBargainCenter/">https://www.facebook.com/MikesBargainCenter/</a>

#### **WOOD STABILIZING**

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

Gallery Hardwoods – Eugene, OR <a href="http://www.galleryhardwoods.com/stabilized.htm">http://www.galleryhardwoods.com/stabilized.htm</a>

WSSI (Wood Stabilizing Specialists International, Inc.) – Ionia, IA – some folks have had issues with them, some folks are totally happy. <a href="http://www.stabilizedwood.com/">http://www.stabilizedwood.com/</a>

Alpha Knife Supply – Cedar City, UT <a href="http://www.alphaknifesupply.com/">http://www.alphaknifesupply.com/</a>

Turn Tex Woodworks – San Marcos, TX "Cactus Juice" and pressure chambers etc. for the doit-yourself folks. https://www.turntex.com

### **OTHER GOODIES**

Grey Leather Company – Eugene – Hannah Morgan does custom leatherwork, including sheaths. <a href="https://www.facebook.com/GreyLeatherCo/">https://www.facebook.com/GreyLeatherCo/</a> <a href="https://www.etsy.com/shop/GreyLeatherCo">https://www.etsy.com/shop/GreyLeatherCo</a>

Sally Martin Mosaic Pins – So. Oregon <a href="http://customknife.com/index.php?cPath=13">http://customknife.com/index.php?cPath=13</a>

Oregon Leather – 810 Conger Eugene and 110 N.W. 2ND Portland http://www.oregonleatherco.com/

Rio Grande – jewelry tools/supplies <a href="http://www.riogrande.com">http://www.riogrande.com</a>

Otto Frei – jewelry tools/supplies <a href="http://www.ottofrei.com">http://www.ottofrei.com</a>

M3 Composite – space age mokume & other <a href="http://www.m3composite.com/">http://www.m3composite.com/</a>

Voodoo Resins – striking resin handle material <a href="http://www.voodooresins.com/">http://www.voodooresins.com/</a>

The Engineering Toolbox (formula & info reference) <a href="http://www.engineeringtoolbox.com">http://www.engineeringtoolbox.com</a>

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.