

 **EUGENE 5160 CLUB ~ FEBRUARY 2021** 

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

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



## 5160 CLUB ZOOM MEETING

### FEBRUARY 4TH 6PM

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

Here's the Zoom download site:  
[https://zoom.us/download#client\\_4meeting](https://zoom.us/download#client_4meeting)

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

The recurring "join meeting" link is:  
<https://uoregon.zoom.us/j/96183250858?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":  
<https://www.facebook.com/groups/5160ClubTheGroup/>  
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!



This month I have to report the loss of one of our own. On December 31<sup>st</sup> **Joel Purkerson** passed away after a long struggle with chronic illness. At Ellen's request I have included his obituary in this newsletter. It follows the meeting notes below.

Joel loved knifemaking and was a kind and generous man. He is missed.



On a personal and unrelated note, I've been in a funk lately. On January 24<sup>th</sup> my cousin Rick succumbed to Covid. That leaves me the last one standing in my generation of Kemps.

Rick's son Brian will be making the arrangements and helping Rick's widow, who also has Covid and has underlying health issues.

Brian came out of quarantine on the 28<sup>th</sup>. That was Brian's 2<sup>nd</sup> round of Covid. His first round almost a year ago left him with neuropathy issues and a loss of strength in his hands.

Keep well folks, this stuff ain't over by a long shot.



## JANUARY ZOOM MEETING

**Edward Davis** started the meeting by noting that he'd sent out the two chef knives that he showed us last month. For safe shipping and handling he used a couple of scraps of leather, cut to size and wrapped in duct tape, for temporary sheaths. It all went well. Except that he cut himself in the process and so sent a bit of the maker (in the form of blood stains) out along with the knives!

Discussion turned to the problem of a blade rusting if kept for long periods in a leather sheath. Edward noted that it is more of an issue with chrome-tanned leather, but even hardened veg-tanned leather can retain enough moisture to cause rust.



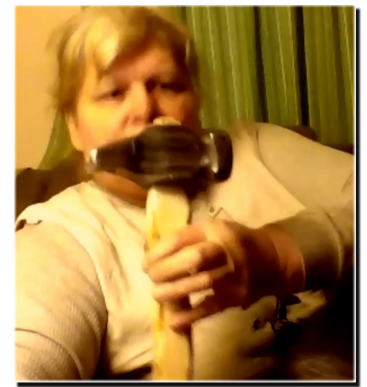
**Brome McCreary** noted that he just uses a piece of corrugated cardboard shaped into a squashed tube. "I put the logos and printing on the inside..." and his customers are very happy with that, and keep them to use when bringing the knives back for sharpening.

**Frank Bobbio** has been using Brome's method of heating and flattening schedule 20 PVC pipe for quick and durable knife sheaths. This one is curved to accept his hori hori garden tools.



In response to a question, **Jove Lachman-Curl** said that he's looking for input on favorite hammers, and is looking for a square or rectangle head hammer with a cross-peen. Jove and Lynn both favor a hammer at about a 2-1/2 pounds.

**Rashelle Hams** showed a hammer that she is in the process of making that is about that weight. Rashelle makes all her own hammers, as well as offering them for sale. Catch her at <https://rashellehams.com>



Rashelle made a point about how much her forging press has sped up her work (especially while her shoulder heals). She has a Coal Iron Works press.

**Lynn Moore** has been working on the knife he showed last month. This false-edge drop-point hunter has copper pins in an ironwood handle.



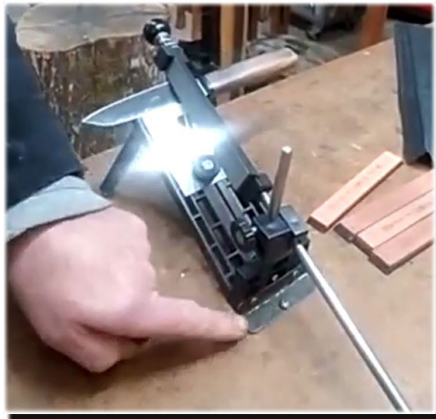
Lynn asked Frank Bobbio who's press he has – it's an Uncle Al's press. Frank showed one of the hammers he's made, then showed us his new rack to hold all the dies he's made for his press! With the addition of some studs on the side of the press itself this will get all his dies off the welding table.



Later in the meeting we focused on Frank again as he talked about his new knife sharpening setup. He was impressed by the Edge Pro Knife Sharpener. Edge Pro puts out two lines of sharpening equipment. Clones are available on eBay and Amazon for both lines. Based on the online feedback, Frank went with a Chinese clone of the lower-cost “Apex” sharpener.

Frank noted that as-delivered the sharpener has suction cups to hold it in place on the workbench. They don't work worth beans, so he took those off, drilled some holes in his workbench to match the stubs of the sharpener's attachment screws (for the now non-existent suction cups). To secure the sharpener further he added an L bracket bolted to the back of the sharpener with a wood screw into the workbench.

The sharpener's arm holds interchangeable stones. The angle of the arm is adjustable. The knife is placed at the front of the sharpener. Frank added a rare earth magnet (from a computer hard drive) under the front of the sharpener to hold the knife in place better. Frank and Brome both put masking tape on both sides of a knife to protect everything but the edge from getting scratched up.



Frank found a set of Chinese diamond stones (240/600/1000 grit) that fit in the sharpener arm and is happy with them. “The diamond stones are definitely better” than the stones that came with the unit.

Frank demoed the process for us. It looks sweet! “It seems to be more accurate and faster than the Lansky.” Frank also does sharpening on the belt grinder, edge up and running really slow (5 to 10 %). He says that using the belt grinder (if you've got your mojo working) gives a more consistent, factory-like edge. To get the same effect with an Edge Pro style sharpener takes a lot of care and a lot of time. On the other hand, to do a decent job on the grinder you have to be using the grinder regularly so that you

have your skills honed – and if that is not the case, the Edge Pro style sharpener is the better option.

For the final sharpening finish he uses a couple of pieces of leather – flesh side up – one charged with green chrome, to remove the final burr.

In response to a question from Frank, Brome (who has sharpened thousandths of knives on his Edge Pro) said that he likes an angle of 19° for “working knives” and kitchen knives. For heavy duty and camp knives it's more like 21°.

Brome also shared that he buys his replacement stones without the backing. He buys 1” wide aluminum bars from Home Depot and makes his own backing from them. That also allows him to make specialty sharpeners for serrated blades by gluing various diameter ceramic rods into a shallow slot in the aluminum backing piece.



As usual, talk turned to knife steel properties and heat treatments, which brought up Larrin Thomas's book Knife Engineering. The book was recommended by several of the folks present. Larrin is the son of Devin Thomas of Damascus steel fame. Larrin got his PhD in metallurgy, has spent a serious amount of time as a metallurgist in the auto industry, and started the Knife Steel Nerds website some years ago. It's a great source for scientific testing and knowledge of knife steels.

Frank shared that Larrin has written articles on 5160 and other fairly simple steels that indicate the “martensite embrittlement” is an issue with these steels. His testing indicates that the tempering window for 5160 is narrower than most of us had realized. 5160 has had the reputation of being a very forgiving steel for backyard heat-treat. Frank summarized this as “5160 has one of the narrowest bands of being able to hit your austenitizing temperature mark and to hit your tempering temperature mark.” Which is pretty much the opposite of what most of us have thought!



Here's a link to an article by Larrin Thomas on heat treating 5160:

<https://knifesteelnerds.com/2019/04/01/how-to-heat-treat-5160/>

**Jove Lachman-Curl** has been doing 1095 stock removal knives and was asking about what was supposed to be a “sweet spot [at 425°] for tempering 1095 where you can get more toughness without losing much hardness... I tried a few times but I never could get it to perform, and I've been much happier when I've tempered at 450°.” The pieces that Jove tempered at 425° tended to chip more easily than he wanted.

Frank indicated that the austenitizing temperature will also have an impact on the final characteristics of the tempered blade. This is documented in the writings by Larrin Thomas at Knife Steel Nerds.

*For backyard heat treat folks, it should be noted that the temperature at which a steel goes non-magnetic is not always the same temperature as where that steel becomes austenitized (ready for the quench). For backyard heat treating, practice and testing with one particular steel until you home in on a method that produces the results that you want may be the only way to compensate for the lack of sophisticated heat treating ovens.*

**Martin Brandt** pointed out the need for a quick quench to miss the “nose” on the TTT diagram and relayed how a friend who makes farrier's knives from 1095 had to equip his quench tank with pumps to create a laminar flow for a faster quench.

Jove noted that his experience with 1095 is that it is more sensitive than some other steels to not heating it high enough for the quench. “Like if you are at 1450° rather than 1500°... you need to be closer to 1500° or it just won't harden it!”

“Yah” Martin chimed in “this whole thing can get pretty technical once you get past a magnet and a pan of goop!”

From there the discussion turned to Forged In Fire and their various rules. What you can bring, what you can use, and what you can and cannot find in their shop. Issues with the temperature control (or

not) for the forges that they have. And how the TV lights mess up by-eye ability to gauge temperature.

Edward jumped back in with a “grab bag” of leather-working tools one of his relatives got for him from Amazon. One was this skiving knife with the cutting edge on the front (like a thin, broad, chisel):



He likes this design better than what he's been using. After seeing what Tandy is charging for something like this Edward is seriously thinking about making some for sale. And maybe the round “head knife” version too.

Martin took off from that – noting that there is a niche market for Twca Cam Welsh carving knives. They are similar in shape to this bowl carving knife that Brome has, but generally have a long handle so that the carver can get good stability and leverage with it. And the blade doesn't come straight out of the



handle like this one, but starts with what might be a 60° sharp bend before starting the circular arc.

Then Brome took off from that – showing another double-edged bowl knife. “It's great because when you get tired on one hand you can switch off to the other hand, 'cause it **works** on your wrist!” He noted that it was made from a file and you can still see the file marks in portions of the blade. Well OK, **he** can see the marks but not so much through Zoom.



Brome and Martin compared notes on how you have to change your cutting direction inside a bowl to avoid the grain trying to chip out as you work your way around.

Frank asked **Tyler Aldrich** about a chef knife that had already gone out to the family member who'd ordered it up. It's the gorgeous chef knife he posted video and photos of on his Instagram account (tyleraldrichknives) on December 27<sup>th</sup>. Amboyna burl handle with a splash of light sapwood stabilized by Gallery Hardwoods. 108 layer random Damascus: <https://www.instagram.com/p/CJUEZuRDgX3/?igshid=1pc4wztl7vkn7>

Tyler showed us another knife with handle wood from Gallery Hardwoods: masur birch died black, sanded to 2500 with Tru-Oil finish. Tyler can't say enough good things about Larry at Gallery Hardwoods. "For a person who is local... and giving us wood that is perfectly stabilized, and his prices are incredible."



Tyler went on to express his appreciation for the help he's gotten from folks in our group, and to offer some items that he has extra of for free or trade "because the wealth of knowledge that you guys have given me – I can't repay you."

And speaking of sharing knowledge, Jove asked folks about recommended thermocouples (often called pyrometers when they can read up to austenitizing and forge welding temps).

Frank has done a lot of testing for both tempering heat range and in the austenitizing heat range. He noted that a low cost high temp thermocouple that he

bought on eBay is not accurate. So cheaper is not always better.

There is a trade-off in the high temp thermocouples as to whether to run them bare or with ceramic covers. They will last longer with the covers, but it slows down their response to changes in the forge or oven's temperature. Frank's experience is that it can take 10 minutes for a ceramic sheathed thermocouple to catch up with changes in temperature.

Brome said that he's been happy with the one he got from Omega "they're really nice. They're expensive but..."

*Pottery firing cones were also mentioned, but your scribe's experience in using them is that (1) a particular cone bends at a temperature **range**, not at a specific temp and (2) they are slow to respond to rapid temperature **change**, so it's easy to overshoot your target temp when ramping up the forge.*

In relation to doing plate quenching, Frank tossed in valuable tidbits about heat conductivity. The standard measure of heat conductivity is Watts per square meter. Steels in the 0.5% carbon range conduct heat at 45 to 50 W/m<sup>2</sup>. Aluminum comes in at 237. Copper is more like 450. Steels around 1% carbon are more like 25 to 30. Most stainless steel is 15 to 20. So aluminum is a little more than 4 times as fast as 1050, and copper (if one could afford it) is almost twice as fast as aluminum!

Tyler noted that even on steels that don't require plate quenching, he's following the oil quench for high carbon steel with a plate quench to speed up the cooling process and reduce warpage. There was general agreement that this would be good practice.

There followed quite a discussion on quenching practices and experimentation. And steel qualities and sources (especially for scrap prices). Frank's reading of the toughness/hardness charts that Larrin Thomas has put out has made him appreciate those 8670 circular sawmill blades that Dennis Ellingsen used to bring to the meetings occasionally. "With better edge retention than 5160 and 20-30% tougher – I think of 8670 as the go-to steel for everything unless you're going to jump up to a high edge retention stainless steel..." Frank has re-evaluate all



his attitudes about various steels after he started digging into the Knife Engineering book. "...but there's still **way** more information on his blog and web posts than in the book..."

A stainless steel that Frank is holding in higher esteem after seeing Larrin's info is AEB-L, given its edge retention and toughness at its price point. Tyler chimed in "I just heat treated some, and it's incredible!"

"The edge retention is a little marginal" Frank said "definitely not as good as any of the powder metallurgy, but it's very inexpensive and it's very tough... I'm thinking that its toughness is almost as tough as 5160 with better edge retention and it's stainless."

The discussion turned to the question of why – when AEB-L has been around for 100 years – are there so many cheap stainless knives out there. Maybe because factories that churn out stainless knives choose a blade steel based on how long their dies will last stamping out the blade blanks.

**Brome McCreary** rounded out the meeting with a few quick show-n-tells. First was a hoof knife that Brome "dug up in the barn when I was a kid" at his family farm. "A couple of cool things about it: it is, of course, completely hand made... guess what this handle's made of!" It's a rib (probably large deer) hand sawn for the tang, with nails for pins.



Next was a work-in-process kuksa (a traditional Scandinavian wooden drinking cup) that he's been hand carving. "I decided to make it out of madrona because that's my favorite tree... this was harvested from our farmland and I dried it for several years..." After further drying it in the shop – to bone dry – Brome started hand carving it and was reminded just how hard fully dried madrona can be!



Then he showed a leather sheath he made for the knife he'd made for his son a while back. The photo of the bottom of the sheath shows examples of skived leather which are the tapered layers used to flare out the sheath so that the knife handle can snug into the sheath.



Brome uses tragacanth gum (also used as a food additive) on his leather seams to get the fibers to lay down smooth. He does a light burnishing when it's wet, then burnishes it again – hard – when dry.



Then he finished up the EDC knife he showed us last month. Beautiful madrona burl handle.



Keep well, and work safe – and see you in the Zoom-verse.

Your Scribe ~ Michael Kemp



In Memory Of

## Joel Purkerson



Joel Stephen Purkerson, 51, passed away unexpectedly Dec. 31, 2020, at his home in Corvallis, Oregon, after a long struggle with chronic illness.

Joel was born Feb. 22, 1969, in Lebanon, Oregon, to Kaye and Grace Purkerson. He grew up in Lebanon, and graduated from Lebanon Academy of Christian Education.

Joel started his first job as a newspaper delivery boy at age 7, with the help of his mother, and continued delivering papers into his teenage years. He received an award as Carrier of the Month at age 11, and Carrier of the Year at age 15. As a young man, he was very interested in the study of sharks and marine biology.

Joel joined the Army National Guard at age 22, where he served for a short time at Fort Benning, Georgia, until he was injured during training and left the military. He worked at many different jobs over the next ten years, in and around Portland, Oregon. In January, 2001, he married Ellen Purkerson of Hamilton, Montana, where they lived for the next three years. Joel and his family moved to Oregon in 2004, living in Lebanon, Eugene, and Corvallis. Joel attended the University of Oregon while living in

Eugene, where he studied Russian language for several years.

Starting in 2007, with the tutelage of Master Smith Wayne Goddard of Eugene, Joel was able to pursue a life-long dream of becoming a knife maker, designing and making knives, machetes, and swords for over ten years. He was a member of the Oregon Knife Club for many years, as well as a vendor at the annual knife show put on by the Oregon Knife Collectors Association.

Joel is survived by his beloved wife, Ellen (Corvallis); his son Stephen Purkerson of Vancouver, WA; his step-sons Jim Rinehart of Vancouver, and Nikolai Serban (Ron Wixman) of Eugene; his step-daughters Ceitdh Belleque (Nick) of Beaverton, Jessica Serban of Eugene, Maggie Cairns (Neil) of Aloha, and Caroline Hart of Portland; his mother, Grace Purkerson of Lebanon; his older brothers Neil (Judy) of Lebanon, and Paul (Lisa) of Adair Village, and his older sister Karen Bales of Lebanon; his two grandchildren, Serenity and Arlo, as well as multiple nieces and nephews. Joel was predeceased by his father Kaye Purkerson in 1987.

The family plans to spread Joel's ashes at Crater Lake, and have an informal memorial gathering when it's deemed safe to do so. In lieu of flowers, the family asks for donations to be made in Joel's name to the Oregon Coast Aquarium.







## 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 “Knewsletter” link and scan a recent newsletter for a membership form and contact info.

### 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!  
<https://lambowie.com>

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

Knifedogs Forum (USA Knifemaker)  
<https://knifedogs.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/>

Hype-Free Blades  
<http://www.hypefreeblades.com/forum>

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

### REFERENCES

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  
[Sg2goddard@comcast.net](mailto: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.  
<http://zknives.com/knives/steels>

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

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

Tempil Basic Guide to Ferrous Metallurgy  
[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)

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:  
[http://elementalforge.com/tips\\_notes/](http://elementalforge.com/tips_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...  
<https://www.facebook.com/FarrierSuppliesOR>  
(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). <https://whitehartforge.com/classes/>

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

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

James Austin offers forging classes in Oakland, CA – axes, tongs, viking anvil, etc.:  
[http://forgedaxes.com/?page\\_id=148](http://forgedaxes.com/?page_id=148)

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

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**

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

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

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  
<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 – Cedar City, UT  
<http://www.alphaknifesupply.com/>

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

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

## **STEEL SOURCES**

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

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

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  
<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/>

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

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

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  
<http://www.amteksteel.com/index.html>

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

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

## **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  
<https://originblademaker.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.  
<https://originblademaker.com/>

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

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](http://www.twuertz.com/Home_Page.php)

Grinder-In-A-Box – grinder kit, assembly required  
[http://www.polarbearforge.com/grinder\\_kit\\_order.html](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  
<https://www.sunray-inc.com/products/wheels/>

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](http://www.alaforge.org/Trading_Post.html)

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”  
<http://www.trugrit.com>

## **FORGE & REFRACTORY**

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

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

Mathewson Metals – forges, burners, anvils...  
Tacoma Washington  
<https://mathewsonmetals.com>

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](http://www.hightemptools.com/supplies-mainpage.html)

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

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

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  
<https://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 aka Bent River Forge  
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/STAMPS**

Ernie Grospitch – Blue Lightning Stencil  
<http://www.erniesknives.com/>

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

Marking Methods, Inc.  
<http://www.markingmethods.com>

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

Steel Stamp, Inc.  
[www.steelstampsinc.com](http://www.steelstampsinc.com)

LectroEtch – Ohio  
<https://lectroetch.com/>

## **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: [https://trugrit.com/index.php?main\\_page=index&cPath=34](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/>

## **WOOD & HANDLE MATERIAL**

Burl Source – handle blocks/scales – So. Oregon

<http://burlsource.us/>

<https://www.facebook.com/BurlSource/>

Shelton Pacific – stabilized wood – Shelton, WA

<http://stores.sheltonpacific.com/>

Gilmer Wood – N.W. Portland

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

Bamboo Oasis – wide variety of bamboo –

Beaverton, OR phone 503-703-1345

<https://bamboooasis.com/>

North Woods Figured Wood – Gaston, OR

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

Atlas Billiard Supplies – Wheeling, IL – cue blanks

of Micarta and exotic woods – with some sizes

suitable for knife handles. <http://www.cuestik.com/>

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

<http://treeproductshardwood.com/>

Northwest Timber has larger pieces of figured wood.

In Jefferson Oregon between Albany and Salem.

<https://nwtimber.com/>

and it doesn't hurt to check Mike's Bargain Center on Hwy 99 just south of Beltline, Eugene

<https://www.facebook.com/MikesBargainCenter/>

## **WOOD STABILIZING**

K&G (Knife and Gun) – Lakeside, AZ

Good reputation with everybody.

<http://www.kandgstabilizing.com>

Gallery Hardwoods – Eugene, OR

<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 – Cedar City, UT

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

Turn Tex Woodworks – San Marcos, TX

“Cactus Juice” and pressure chambers etc. for the do-it-yourself folks.

<https://www.turntex.com>

## **OTHER GOODIES**

Grey Leather Company – Eugene – Hannah Morgan does custom leatherwork, including sheaths.

<https://www.facebook.com/GreyLeatherCo/>

<https://www.etsy.com/shop/GreyLeatherCo>

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/>

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/>



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.