

EUGENE 5160 CLUB ~ APRIL/MAY 2018

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

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



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.

Blade Show West returns to the Portland Convention Center on October 5-7. A table goes for \$300 through April, then \$350. <http://www.bladeshowwest.com/>

CORRECTION: Mike Johnston corrected me: “Warm tap water is great for forming leather – it's when you bring the temperature up to near-boiling that it'll turn leather into something like thin Masonite and you can just snap it - it soaks all the oil out of it.”

OKCA APRIL SHOW

We had a GREAT time at our 5160 Club table – and wandering through the show & visiting friends! Samba Ja woke us up Saturday morning:



MAY MEETING

Thursday May 3rd – 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

Northwest Blacksmith Association – Intro Blacksmithing classes Portland, OR & White Salmon, WA; NWBA Conference May 11-13 Longview, WA; SwaptoberFest October 26-28 Longview, WA <http://blacksmith.org/events/>

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

The peak attendance was mid-day Saturday. There were fun and educational demonstrations and the usual – and unusual – suspects...



... including at the 5160 Club table!



MARCH MEETING NOTES



MICHAEL KEMP (*that would be me*) started up the meeting by passing around my finished saex. In the last newsletter I gave all the gory details about it.

But since it's so rare that I complete a knife – and hey, I'm the guy writing the newsletter – so here's another photo of it...



In response to questions I relayed that the handle is a hidden through-tang. I threaded the end of the tang and drilled and tapped the butt-cap.

The finish on the steel parts is the manganese version of Parkerizing. Parkerizing comes in two versions – zinc phosphate and a manganese phosphate.

Maybe it's just my lame techniques, but cold bluing doesn't last for me. Kitchen use has it worn off in a few months. I wanted to try out Parkerizing – and I like the result. Maybe someday I'll do a kitchen knife with it and see how it lasts under kitchen use.

BROME MCCREARY noted that he had been going through old Blade magazines and copied out a couple of articles that might be of interest. One was a March 2013 article by Wayne Goddard about a special platen for better plunge lines. The other was an article on adapting Rockwell hardness testing to compensate for the bevel angle from October 2010.



Brome often modifies knives for folks – or just on his own. He brought in a big KA-BAR knife that he re-profiled. Apparently they tried to jump on the zombie bandwagon with a “Zombie-Killer” machete sized blade.

Turns out they made more than they needed and were closing them out for \$40 including an impressive sheath and small utility sidekick knife... so Brome got one and revamped it to be more of a SE Asian Parang Chandong – in the photo you can see a printed photo of the KA-BAR Zombie-Killer and Brome's revamped version:



Next up Brome showed us his homemade clamp for holding a blade when drilling holes (to position the blade and keep it from getting caught by the bit and “helicoptering”). Its base is a heavy piece of square steel tube. The tube can be clamped to the bench press table. The “top” of the tube is drilled and threaded to accept thumb screws that tighten a clamping plate which secures the blade.



He showed how – if you clamp the blade inside the tube rather than on top – you can use a hand clamp to position a handle scale against the tang and drill through both. He plans to cut “windows” on the side of the tube to make it easier to position a blade inside the tube.

Other threaded holes can be used with thumbscrews to compensate for bevels in the blade or tang.

Next up **BROCK** came to the front – saying that he's been busy turning cold steel into sharp steel – and thanking Erik Land for “being ridiculously helpful” helping get his grinder set up and with heat treating.



Brock showed us a large slab of burl that he'd gotten from a friend who's granddad passed away and left a shop full of supplies. He asked if anyone could ID the wood – the consensus was maple.



LYNN MOORE was up next with the kukri blade he has been working on for an OKCA display award knife at the April show. He's got it shaped and heat treated and will be putting myrtle burl handles on it.

The steel is 1095. Lynn noted that he called Martin Brandt for help

on hardness testing – Lynn's hardness tester was coming up with low readings, but the files just slid off it. The conclusion is that it's good and hard, but because of the size of the blade it's difficult to get a good reading on the tester due to the blade's weight and tendency to shift around.



If you are an OKCA member, you can see a photo of the finished blade on their Facebook page – and it was on display at the OKCA table at the front of the show, along with the other award knives (until the deserving award recipients select their prizes).

I asked **MIKE JOHNSTON** if he'd brought anything with him (knowing darned well...) so he came to the front next. “Some of this you've seen – some of it you haven't” he said as he opened his case.



First up was a nakiri (Japanese veggie slicer). This was a commission – done in 1080 steel. Mike's clay heat treat got interesting when “sections of the clay blew off during the quenching process... so I got some odd heat treating marks... The guy who ordered this wanted a 12” nakiri. I forged it out and I said 'You really don't want this 12” long nakiri – it's unwieldy' so I convinced him to let me cut it down to 10”.”

This blade is beveled on one side only. He found that a single bevel to the edge made it too fragile – so he put a very fine 2nd bevel at the edge. *I believe I've heard this referred to as a micro bevel.* The grip has a copper face on a padauk handle with Sally Martin mosaic pins.



The blade is thin to start with, and Mike noted that the single-side bevel on this one is set up for a right-handed chef. The bevel faces away from the vegetable being cut and lays down the slice while staying true on the side of the vegetable. Someone in the group chimed in “when you use a knife like that it changes your idea of what a knife is.”

It was noted that chopping or any twisting of this style of knife on the cutting board is considered abuse of the blade. It is so thin and hard that those actions would chip the edge. These blades are made for creating totally clean vegetable slices.

He brought out the hamon using ferric chloride for 45 seconds and 0000 steel wool, wipe it down and repeat for a total of four rounds (no steel wool on the last round). Rubbed with bees wax.

Next Mike passed around a knife he's working on from a billet of low layer Damascus he made at John Emmerling's shop. 1095 and bandsaw blade. He took a scrap end from the billet – squared it up and twisted it a few times – then forged an EDC sized blade:



To bring out the pattern he did four 45 second soaks in ferric chloride with scrubbing in between – then another four 45 second soaks in ferric chloride with 1000 grit cleanup between – four more times with 1500 grit – four more times with 2000 grit.

From the main part of the billet he produced this Bowie – I got a better shot of the pattern in this one: In response to a question Mike said that the billet was started from pieces that were 2” x 5”. The 1095



was about the same thickness as the bandsaw steel – so they used 3 layers of 1095 pre layer of bandsaw steel. They stacked 12 layers of 1095 with bandsaw steel interleaved in. Which gave them a billet

approximately 2” x 2” x 5”.

In the forge welding, the first cutting was into 6 pieces (re-stacked and forge welded) then into 5 pieces (re-stacked, forge welded, then turned the billet on its side and forged down the bar against the edge of the pattern – if I understood right). At this point the billet was 1-1/2” x 1/4” x 12”.

“He doesn't use flux, but he's got a good gas rich environment on his forge.”

The process took 5 hours. Soaking the billet for 10-15 minutes at 2320°f – then light taps on the power hammer (flat dies) followed by light touches with the press (flat dies) – then back into the forge. Do this for three heats, then brush the scale off – cut – stack – repeat. “Now before the last cut and stack we did run it through his surface grinder.”

He didn't worry about the rust on the 1095 or grind off the surfaces (except for the final pass on the surface grinder) – just brushed off the forge scale.

And for his grand finale “So – it's done!” Mike said as he pulled the gladius out of his traveling case. “The brass work was nothing but a pain in the butt... as I knew it would be.”



STEVE GODDARD was up next – saying that he got inspired by an old carving knife that his dad collected to make one “on steroids”.

He started with planer blade - “After lunch today I put a 36 grit ceramic belt on and started grinding... I think I bought these

[planer blades] at a garage sale a few years ago for \$2 – it's hard!"

Here's the raw planer blade – Steve's carving knife in progress – and the old carving knife from Wayne's collection of garage sale finds:



Then for a memory-lane visit, Steve passed around a knife he made when he was 13 – one of his first knives. Mountain mahogany handle



Next up was a new knife. Steve wanted to make a tanto – but manly – “so this is the Goddard take on a tanto.”



Steve noted that he wet forms the leather by dipping

it in the dye rather than with water. Wrapping the blade with plastic wrap and wet forming the leather.

Finally, Steve pulled out a pocket knife he'd made in about 1975. “Dad complained about 'I need to take care of it' and I'd put a carbon blade in it and then I came home from school one day and he'd put a 440C blade in it so that it wouldn't rust.”

The elk bone handle has cracked over the years. Gives it character.



MARTIN BRANDT came forward saying “this isn't too exciting – but it is to me – this one may come out!” And he passed around a san mai project he's working on. The center is Black Diamond file (prior to Nicholson) with chainsaw Damascus on the outside (Oregon Chainsaw chain).



He's going to do some more grinding work before heat treat – but gave it “a quick dunk in ferric chloride to see the pattern.”



ERIK LAND said “I'm trying to get ready for the [OKCA April] show – so I've got folders everywhere on the bench... over 20 folders in the works. These are all stainless now – CPM 154.”



In response to a question Erik noted that he does his own heat treating with a “very nice heat treat oven... 1925°f for hardening and temper the springs at 1135°f and temper the blades at 425°f.”



Then Erik shared one that got away from him. “I put this one together today and lo and behold – the tip is sticking up out of the handle!” Which was puzzling since he has made this pattern a number of times.



First he thought that he'd forgotten to grind a surface – but when he rechecked with the rise and fall gauge everything checked out. He re-checked

the scales against the pattern and they are correct... and yet when he reassembled it the point still sticks out (as you can see).

“The only thing I can think of is that possibly I over tensioned the spring.”

So while he's puzzled about the wayward folder he was excited about doing the show! And as usual we had a great time with the 5160 Club tables at the OKCA April show.

There was extended discussion and speculation about what might be going on with the errant folder.

Erik actually has two folders of this pattern that have the same problem. Now he wonders if he swapped the blades between the two of them after heat treat. Each blade is custom fitted with the other parts of the folder – so swapping the blades could produce odd results. That will be the first thing he checks!

I tagged **FRANK BOBBIO** next – and although he'd been unexpectedly called off to California for a month he had a nice knife roll full of items.

First up is this Damascus paring knife. Cocobolo, African blackwood, brass:



Then he passed around a test knife: a low layer count (20 layer) Damascus from pallet strapping and bandsaw blade – Frank has noted in the past how to select appropriate “high carbon” pallet strapping: www.elementalforge.com/5160Club/201701Newsletter.pdf He put a quick handle on it and they have been using it in their kitchen for a month.



Frank noted that a 3” initial billet will give him 60 layers of bandsaw/pallet strap.

There was discussion about how to make the dark black from ferric chloride adamant so that it is not so easy to rub off. Frank noted some practices that he finds help set the black: use straight ferric chloride (not multi-etch blends); **don't touch the blade after etching**, just wash it off; neutralize the ferric chloride with ammonia spray; boil the blade either in water or water with baking soda for an hour; rinse it off; air dry with compressed air; spray it with WD-40; wrap the blade in saran wrap; let it sit untouched for 2 or 3 days (or at least leave the blade wrapped if you work on the handle).

Next was another paring knife – bandsaw steel (selectively heat treated), myrtle wood stabilized by K&G.



And then he passed around another of his RR spike knives. He can get these hardened by torch-heating the edge while holding the blade above a bucket of Super Quench – keep the edge at light orange for awhile, then dunk it quickly. If you are not right over the bucket you it will take too long to get to the water and not get a hardened edge. You can see the temper line in this photo:



My understanding is that Super Quench is a home-brew amped-up water quench with a recipe like:

5 gallons water

5 lbs salt

28oz bottle of Dawn blue dish washing detergent

8oz bottle of JetDry or other rinse aid

You can substitute Simple Green for the JetDry. If one of you has a favorite Super Quench recipe, let me know and I'll put it in the next newsletter. This is a more aggressive quench than water – so I would expect it to cause high carbon steels to crack.

And on the rustic theme – Frank passed around a RR spike BBQ knife-and-spatula set:



Have fun and work safe!

Your Scribe ~ Michael Kemp



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 a small show in December and 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 “Knewslettter” 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/>

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

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

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
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 own “Knife Info” has some of my 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.pmtsc.com/tool-die-steel.php>

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

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>

Oregon Blade Maker [Oregon] – affordable chassis
and accessories, good reputation – you supply the
motor <http://stores.ebay.com/oregonblademaker>

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 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/>

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

Steel Stamp, Inc.
www.steelstampsinc.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/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.