THE MOSTLY MONTHLY NEWSLETTER OF THE

EUGENE 5160 CLUB ~ NOVEMBER 2018

https://www.facebook.com/5160Club newsletter archive: http://www.elementalforge.com/5160Club/

NOVEMBER MEETING

Thursday November 1st – 6:00pm at David Thompson's shop. Please do not arrive before 5:45pm. 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

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5160 at OKCA Shows – The deadline for reserving our April show table is coming up. I'll bring it up at the meeting and we'll see who wants to join me at the 5160 tables for the December and April shows and/or chip in to defray the table charges.

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OKCA December Show – December 8th – 7:00AM setup for table-holders – Free to the public 8:00AM-4:00PM. $40 per table. See the OKCA newsletters for details and developments: http://oregonknifeclub.com/knewsletters.html

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OKCA April Show – this is the big one: April 12th is OKCA members only. April 13th & 14th are open to the public – admission is $6/day – members free. $120/table + OKCA membership. 360 tables at the Lane Events Center. Everything from the world of cut! http://oregonknifeclub.com/okcashow.html

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Northwest Blacksmith Association – Mentoring at Cowlitz Expo – Longview WA. Intro Blacksmithing classes at White Salmon, WA. http://blacksmith.org/events/

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

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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/

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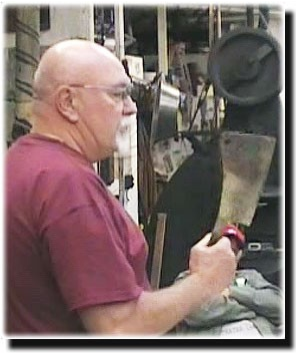
David Thompson – has coke and coal for sale (near Jerry's in Eugene, OR) – Talk to him at one of our meetings or call 541 688-2348.

October Meeting

Michael Kemp *(that would be me)* opened the meeting with a few reminders, and set out some chopped up pieces of the bandsaw steel for anyone who couldn't deal with the big chunks that Dennis brings in.



Mike Johnston was first up. His first pass-around was a work-in-process cleaver made out of "RGSS – Real Good Saw Steel... from a big old round saw... hardens up really nice... did an edge heat and edge quench on it. After I hardened it you couldn't touch it with a file – wouldn't even leave a mark on it and after I tempered it back it would mark but not terribly." Quenched from approx. 1575°f and tempered in three 1-hour sessions at 375°f. The pattern is from an 1885 Samuel Lee cleaver.

Then Mike brought out some knives that he was taking to Blade Show West. First was a Bowie that Mike had brought to the May meeting while he was still working on it. This time around it's finished and with a handsome sheath.

From the June newsletter: "The blade was 12" long, forged from a trailer leaf spring. I got a wild hair to make an "S" guard from cable Damascus, so I forged a billet with two folds. It welded nice and tight with no voids or inclusions and a tight pattern. The handle had red and white spacers separating the guard from the black walnut handle as well as the black walnut and the deer crown other rear half of the handle."

Mike added that the trailer leaf spring spark tests out like 1095.

Next up was a combat knife. Mike didn't know what the wood was *(offhand I'd say this looks like palm).* "It was real light – where it turned dark it had really light little flecks through it." This is a blade he forged at our latest hammer-in. Convex grind on the blade edge and clip.

And another blade from the coil spring that Mike forged out at the hammer-in. Ziricote handle.

Then a third knife from what he forged at the hammer-in – with deer crown handle:

Mike noted that he used internal pins on this piece – inserting pins in the tang that could slide into the cleaned crown – then filled with epoxy.

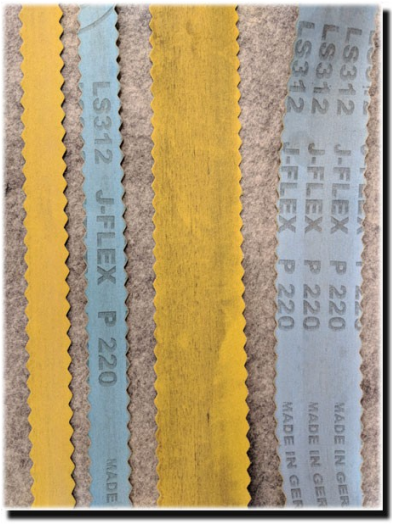
And finally, from the hammer-in forging, a dagger made of cable Damascus with ziricote handle. Copper bolster and pins.

"Then this one" Mike said... "this is low layer count Damascus that auto-hamonned in the quench. The guard, ferrule, and frame are 1080. India rosewood handle and stainless steel pins. The inserts in the sheath are lizard skin.

LYNN MOORE came to the front. "About three weeks ago Marty and Dave and Blair and I got together on a Saturday morning and went up to Frank's to play with his induction forge. We each made hammer heads. This one's mine – boy that induction forge is a lot of fun."

Next up was "a knife for the guy that's been giving us steel – I've been working on it for awhile... I just glued the handles on last night..." the blade is from a saw blade. The scales are another mystery wood, but darn it's pretty, pinned with nickle silver. There's finish work to be done but looking good!

Next up Lynn brought some ceramic 72" belts that he really likes. He gets them from Pop's Knives and Supplies. The scalloped edge helps keep the belt from cutting into wood (or steel) on an inside curve.



BROME MCCREARY shared that (like many of us) he's spending more time assisting his elderly father. There are many age-related conditions (glaucoma in his father's case) that can be mitigated if caught early. Regular eye exams are a good thing. Losing your eyesight sucks.

Brome noted that when he was growing up they were family friends with the folks that ran the largest mill in the Myrtle Creek area. They'd let the kids have the run of the mill – and take home old used-up tools. This pickaroon was one such tool. Brome unearthed it while cleaning up his dad's shop, and can't figure out why someone welded a vertical spike on it!

Speaking of things handed down from his father "does anybody know someone who knows how to rebuild a 1938 John Deere B tractor? My dad took it apart... and I've never worked on anything that big." One of our guys knows a guy – and there is a forum called GreenTractorTalk.com!

Brome passed around another "find" from his dad's shop – a Japanese hatchet head. One of the folks had seen this style used for splitting bamboo.

~ ~ ~ at this point folks adjourned to the parking area where a new guy was giving away some industrial bandsaw steel ~ ~ ~

SAFETY ISSUE – Erik Land and I were talking while folks were outside and he shared that he recently had a grit-in-the-eye experience a lot like one I had years ago: "I was out grinding and I got a face full of debris..." some of which got under his glasses and into his eye. Like me, he rinsed his eye and called it good... and like my experience - you'd think you had it washed out and pretty soon you'd feel it again, and you'd flush your eye again.

"Pretty soon it started swelling up and I had a knot..." so he got himself in to the eye doctor. A scratched cornea and gotten infected – and that spread into the eyelid and made a cyst "the size of a marble." So now he's on a two week regimen of smearing antibiotic cream with the consistency of Vicks VapoRub straight into his eye... which keeps his eyesight bleary in that eye.

So there you have another tale where a face shield would have been better than safety glasses. I've gone one step further and use a positive air pressure face mask that has the fan and filter. Some models have fan and filter built into the headgear – some are worn on the belt. I figured with the money I'd spent on the eye doctor – why not prevent another go-round and protect my lungs at the same time.

ERIK LAND started the meeting back up. "I've had a pretty productive month – I've gotten five folders done and they're out of the shop. I sat the table with Michael at the *[OKCA]* April show... and I got skunked at the show BUT all five of those folders and a couple more came from folks who stopped by at the show."

"So what was it? They wanted something different than what you had?" someone asked.

"No, they liked my knives – they just weren't ready to buy. Four of the knives were from two orders and they were matched sets. Each of those people wanted two folders that were identical" Erik explained.

"One of the things that we bring to the table" he went on "is that you can't go down to Walmart and *[get a knife where they]* use wood from grandma's rocker. These all were scale wood that they provided – so they have a meaning. That's one thing we bring to the table as knifemakers."

Then came **Erik Land's Series of Unfortunate Events**. First off he was working on a new pattern and documenting every step with pictures for future reference. "The brightest place in my shop is in front of the grinder under the LED lights." So slip-of-the-hand and his iPhone winds up in the bottom of his grinding bucket. FYI a grinding bucket sits below the grinder and catches the bulk of the grinder dust. It's filled with water to catch the dust from grinder abrasives and steel dust – which makes a nasty slurry to drop an iPhone into.

Yes, he got it out of the bucket ASAP and opened it

up to clean it. The battery was toast but miraculously the iPhone was salvaged (after two days of drying and cleaning)!

Then Erik told about his grit-in-the-eye – with three more folders on the bench. With one clear eye, depth perception is shot – so that brings shop work to a halt. In a couple of weeks it should all be good again.

In both Erik and my episodes, the grit bounced up under our glasses from below – so simple safety glasses like I'd been wearing with the side panels and top protection did not do the job.

Erik then passed around one of the folders that he's working on. It has a tanto style blade. He noted that when he comes up with a drawing for a new design like this it usually takes him three knives to get the kinks worked out – due to all the shapes, spring, and tensions that need to be balanced against each other. The scales are black Micarta:

"Also, I've got a friend who doesn't understand what the difference between a screwdriver and a knife is. I haven't given him any handmade knives yet, but I've given him a whole bunch of Old Timers and stuff... and you ask him 'can I see your pocket knife' and the tip will be gone." So when Erik decided to make a knife for him he decided to make the blade tip into a screwdriver – because that's what he's going to use it for anyway!

And Erik passed around one more pretty one:

BLAIR GOODMAN was jazzed about the hammer-making trip to Frank's shop. "I got to use some new equipment that I'd never used before and I had a great time!"

"My only problem was that night and the next night all I could think about was that hydraulic press going zhzhzhyt, zhzhzhyt I mean to see it squish just what you want how you want it was pretty impressive..." Blair obviously had a great time working and swapping stories with the gang.

His hammer head is 2 lbs 4 oz.

DAVID THOMPSON got up next to talk about the day at Frank's shop. "It's always great walking into somebody else's shop that's together and doing stuff – lots of things to look at... innovative ways that he's reworked his equipment to do what he wants it to do... first of all, Frank's got just the right stuff – but it just doesn't seem right, ya know, working with the induction forge. You put in a piece of inch-and-a-half square and heat it up in less than a minute! And heat just what you want to work – just where you want to work it. Just heat up one end *[of the hammer head]* and just work that – it's amazing."

But David seemed most impressed by how Frank has rigged up his 25 ton hydraulic press with custom dies and punches.

David said he'd been "goofing off" by which he meant that he's been restoring a 25 lb Little Giant power hammer that he's had in storage – and getting it set up so that a forklift can move it around if he wants to take it somewhere. He's looking for a 1hp single phase motor so it can plug in wherever – and a couple of the folks present sounded like they could fix him up.

AARON quipped "I'm developing a little bit of carpal tunnel syndrome, so I made a little hatchet..." A **very little** hatchet. And a couple more hatchet heads and a draw knife.

Quarter for scale.

He also made a drift out of mystery steel and a chisel out of H13 tool steel, but I didn't get photos of those.

He's had fun learning about making the eye and fitting handles. The heads are made from railroad "C clips" aka railroad anchor. Mike noted that that a railroad man had told him that they are 5160. Frank noted that he'd seen specs on the "C" or "J" clips ranging from 1050 up.

There was some discussion about using railroad rail – cut through the web – for guillotine or other fullers – or for press or hammer dies.

FRANK BOBBIO came forward with a caulking gun loaded with Sikaflex 11FC construction adhesive – to glue up Lynn's hammer.

Frank picked up on this adhesive from hammer guru Uri Hofi – from a thread in the iforgeiron.com forums where Hofi described his hammer construction process.

You can get consumer grade Sikaflex at Home Depot that isn't up to the 11FC specs. However, Frank found that HD Supply (in Eugene on West 1st between Seneca and Bertelsen) has it in their catalog and will order it – or you can order it on-line through them.

"This is hammer #2 – it's about 2-1/4 lbs" which he has attached to the handle with a wedge and the 11FC adhesive.

Frank noted that Hofi incises the inset wood with rings, and over-sizes the eye in the head, so that the adhesive also acts as a shock absorber.

As for his hammer head making process, Frank said "with the press and induction furnace and a bunch of tooling – it's really easy to make a hammer in 20 minutes. It's really hard to make a good hammer. That was an hour-and-a-half to try to straighten it... with the press – even though you can really isolate the heat with the induction furnace – *[the press dies]* squish it and one bit will come up or over and then you're trying to straighten it just 1/8 inch. So I don't

know if it's better tooling or a whole bunch of skill level that has to be gained. There's only about 5 procedures to make the hammer – getting them in the right order so one doesn't mess up the next one...” It sounds like custom stop blocks will be created – and it might just take a lot of practice (as David suggested) to get the skill level up.

Frank then went on to another project he's been working on: a fully integral knife where the blade, guard, tang, and pommel are all one piece from raw stock to finished knife.

He brought in examples of the process. For this one he started with a railroad anchor, straightened and cut in half for 1 lb of steel. He wasn't satisfied with the amount of material in the guard area on this one but you can see the general drift:

So he went at it again with 2-1/2 inches of 1-1/4 inch O1 round stock and made 3 knives. 2 are already sold. “This is probably the hardest knife I've made other than a sword. A full integral with the pommel, handle, blade in a Randal #1 fighter.” The steel is Parkerized. Green canvas handle.

That was pretty much the end of the meeting – there were quite a few informal discussions that went on (as usual).

Eventually Lynn and Frank got together and hafted Lynn's hammer head. Frank slathered the handle and inside of the eye with the adhesive. They fitted it up, Lynn drove a wedge into the top (belt-and-suspenders – my kind of guy) then Frank spread a generous amount of the adhesive over the top. Once it cures Lynn will grind off the excess.

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

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

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.
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
ttp://www.bucorp.com/knives.htm

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

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

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.appaltree.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 Lightening 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.