THE MOSTLY MONTHLY NEWSLETTER OF THE

EUGENE 5160 CLUB ~ JUNE 2021

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

5160 CLUB ZOOM MEETING

JUNE 3RD 6PM

Here's the Zoom download site in case you don't already have it installed on you computer or widget: 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=blpkOTlVMXdINlV0YW4wb2NRRjBMZz09

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 set up lighting and 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!

On this last Monday in May we set aside time to honor those who, in Abraham Lincoln's words, "gave the last full measure of devotion" to our nation. It is a debt that cannot be repaid.

MAY ZOOM MEETING

While the meeting was warming up, **Edward Davis** recounted his first use of his Evenheat oven. A fellow U of O professor in the product design department, named Trygve, was looking to make his first folders. He has been designing "tools for sailboat camping," and has come up with his own knife design.

Apparently, rigging knives that are available on the market are either cheaply made imports, antiques, or super expensive. Trygve was working on a design aimed at the middle ground: as solid and functional as the antique knives without being "too expensive." It was all designed in CAD and cut with CNC. Sheep's foot blade on one side, marlin spike on the other, spring in the middle *(if I understood correctly)*.

He brought stainless blades and springs over for heat treat. After a two hour programmed session in the oven they were quenched between aluminum plates and with shots of compressed air. Then the springs

went back into the oven to temper at 1200f for another two hours. He tempered the blades at home in his kitchen (500f).

Frank Bobbio showed us his latest hori-hori-inspired survival knife. It is a single-bevel knife with a regular edge on one side, saw toothed edge on the other, lugs between blade and handle to allow lashing the knife to a shaft, the full tang protrudes slightly at the butt to enable batoning/hammering.

The saw teeth are around 0.050" at the edge. It's not intended for sawing logs. It's for cutting sticks for simple tools, getting into fatwood, scraping tinder.

The non-sharpened side of the blade has a very slight concave dish to it lengthwise, and also bends almost imperceptibly up at the tip. These were intentional, but Frank is thinking about grinding the non-sharpened side flat on the next round.

He also made a Brome-style sheath out of schedule 20 PVC.

This is a bushcraft knife. You can use it for chopping, making tinder, smashing tinder with the butt, or lash it to a spear. "It's out of 8670, so according to Knife Steel Nerds that's the strongest steel out there that's cutlery graded."

Brome McCreary field-tested a prototype and gave Frank feedback on design. "There's about five different functions I wanted it to work for, and also for digging..." so Frank has designed a very strong, survivalist/bushcraft multi-tool in a fixed blade knife!

Frank moved on to the latest in his "Ultimate Garden Trowel" series. These are super-sturdy, forged from rebar. On this version he put a bend at the heel of the handle and dipped that in rubber, so that it can be used forcefully to push the blade into tough soil, or cracks between rocks, or whatever.

Next up was an AEB-L single-bevel right-handed kitchen utility knife. He was self-critical about his heat treatment, but "this has held an edge longer than, I think, any other kitchen knife I've used..." He compared it to a couple of 3V knives he has, noting that you can tell, when sharpening, that the AEB-L is harder. He thinks that because the knife (and edge) are so thin that he's getting a micro-serration on the edge. "It's pretty impressive how long it feels sharp!"

In response to a question Frank said that his AEB-L is from Alpha Knife Supply. He likes them because they ship in flat rate envelope or box. So while their steel price might not be the lowest, it's more than made up for by cheaper shipping rates. For small quantities it works out.

AEB-L is a razor blade steel that was developed incrementally through the first half of the 1900s. "Think of it as a 52100 ball bearing steel except it's stainless... its performance is right about in line with that, and as far a toughness for stainless, it takes the

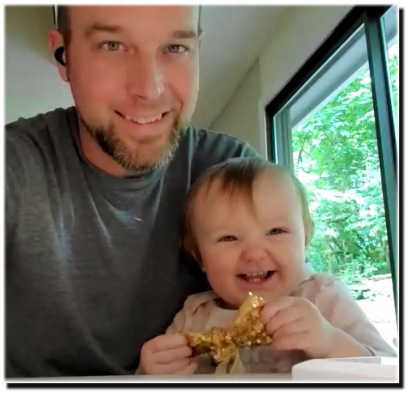
cake for the strongest stainless cutlery steel out there – with 3V being second... and it's really inexpensive."

Frank is so impressed with AEB-L that he values it for kitchen knives above carbon steel or Damascus for that use. "If you can get a steel that is the same as 52100, that generally out-cuts 1084 and 15N20, and it's stainless, and it's cheaper... I think Damascus is great for cosmetics... but for a kitchen knife... you're going to lose the pattern, it's going to get a patina..."

The only drawback he noted is that the heat treating is more complicated than regular "carbon" steels.

There was some discussion about alternative steels, carbide structures, and options for heat-treat for the AEB-L.

Frank asked me (Michael Kemp) whether I hadn't said that I had trouble with my AEB-L heat treat. And yes. Since I was heat treating in my forge rather than an oven, I'm not confident that I got the temperatures right. Then (per posts on Knife Dogs) I quenched in Parks 50 and on down into acetone/dry ice. A couple of the blades came out OK. One warped and I cracked it trying to straighten it. The AEB-L kitchen utility that I made is my favorite kitchen utility knife. I have to sharpen it every month or so, and that's another thing that makes me think that the heat-treat wasn't quite right. Part of my fondness for this knife is that it is done in my "jester's shoe" style. It's great for peeling, coring, slicing, and dicing (at least with my size of hands). My only complaint about this blade shape is that, for example, once I've chopped up a bunch of green onions, most of the blade is too narrow to use as a spatula, and I have to pick up the cutting board to scrape them into the pot. But ya know, I can live with that.



Tyler Aldrich had his muse, Scarlet, with him on the Zoom call.

Tyler recently sent out a Nitro-V chef knife, with awesome edge retention, to a friend.

For himself, he forged a 52100 chef knife. "I'm pretty proud of this." He has It's about eight hours of work into it so far. He noted that it isn't sharpened yet. He has updated his S grind. "It made it perform better... the S grind is supposed to be a convex edge, prior to the cupping..."

After some wandering general discussion, Edward showed us the knife that his Instagram followers voted to have him rebuild. It is a copy of a Buck knife. Edward wants to rebuild a few Buck knife copies – before rebuilding a real Buck.

The blade on this one has a Sheffield brand on it. "I don't think this was made in England. I think it's a Chinese blade with Sheffield branding on it." It is from a batch of ten knives that he bought on eBay, for $20. The handle scales are a laminate. Edward has a chunk of stabilized redwood from Wood Chuck Forge, that he plans to replace those scales with.

When asked how he was going to disassemble the knife, Edward said that, since the pins are brass, he will use an Old Hickory kitchen knife to baton through the Buck copy, cutting the pins. Craig Morgan steered Edward to a book on rebuilding knives. It has a section on this method of disassembly.

And after some general discussion, we all signed off!

Keep well, work safe, and see you in cyberspace!

Your Scribe ~ Michael Kemp

Website Links

5160 Club

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

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

Oregon Knife Collectors Association (OKCA)

The OKCA is putting out their newsletter, but the monthly dinner meetings and the knife shows are COVID canceled for the time being. We are all hoping that their big knife show in April might happen in 2022 – sign up for their newsletter to stay in the loop:
http://www.oregonknifeclub.org/index.html
Go to the "Knewslettter" link and scan a recent newsletter for a membership form and contact info.

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

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

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/

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

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.brodbeckironworks.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

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
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

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

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 Lightening 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

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

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 7th, 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.