

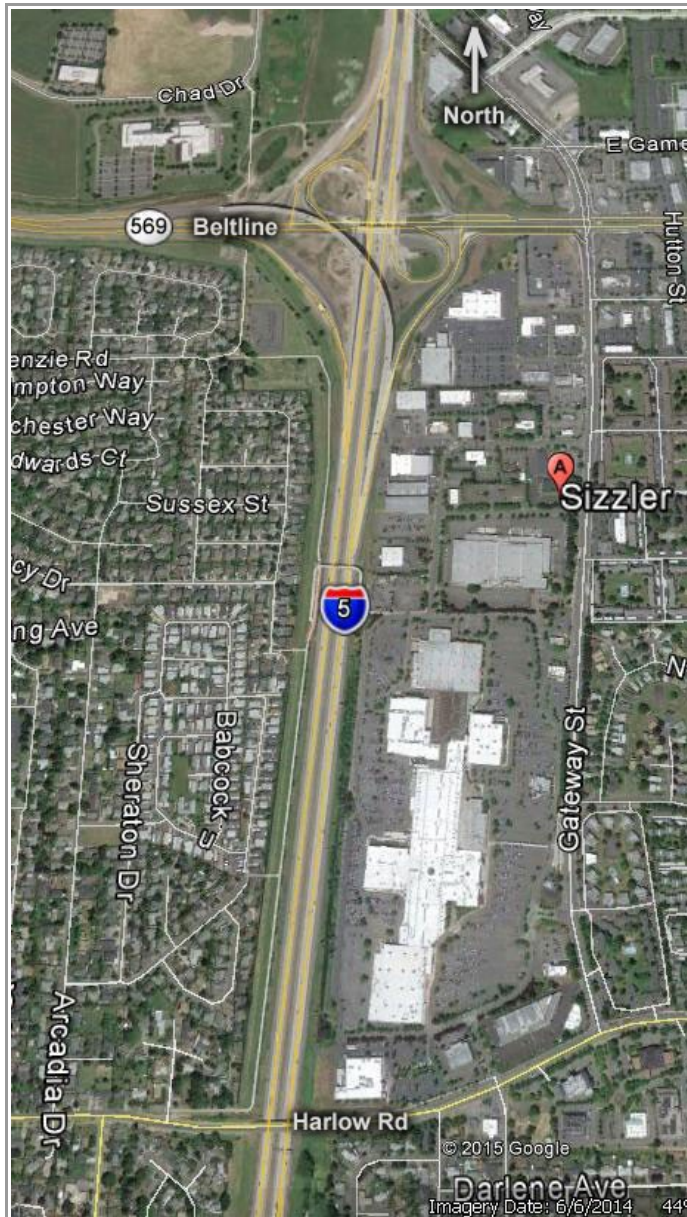
∞ EUGENE 5160 CLUB ~ FEBRUARY 2015 ∞



FEBRUARY MEETING

NEW LOCATION! 5160 club's next couple of meetings will be at the **Sizzler Restaurant** – just north of Gateway Mall at Gateway Street & Postal Way.

Here's a map snapshot:



We'll be meeting on the first Thursday – 2/5/15. Come for dinner (6:00pm) and informal conversation, followed by our usual show-n-tells, demos, etc.

Parking is off of Postal Way. Order up your meal and meet us in the large meeting room at the west end of the restaurant. This is the same room that OKCA meets in on the 3rd Wednesday of the month.

Many thanks to Woodcraft for six years of hosting our meetings... but they are now focusing more of their store resources on classes.

Several of us scrambled to find a new landing spot, and without instituting dues to pay for a space, Sizzler came out on top. If we like Sizzler and they like us it can become our permanent place. If you have an option you like better, bring it to the meeting.

As always, bring your show-n-tell!



HEAR YE, HEAR YE...

- **Tire Hammer Alert:** Quick & Dirty Tool Co. had a commission for a tire hammer and built two. They were offering the 2nd for \$2,795 but are now thinking about doing a raffle. This is the people that hosted the tire hammer build I participated in last Winter. Great folks. <https://www.facebook.com/QDTool>
- The December OKCA show was a success. Good attendance and sales – and a good cache of donations for Toys-for-Tots piled up.
- Tables at the big OKCA show (April 10, 11, 12) are close to sold out – so if you were thinking you wanted a table you'd better act on it. Here's their website for more info: <http://www.oregonknifecub.org/okcshow.html>



DECEMBER MEETING

I (**MICHAEL KEMP**) called the meeting to order and talked about 5160 Club having a table at the OKCA December show – and at the big OKCA April show. There was general agreement, so we did the December show and we have the same great table nailed down for the April show: M10 – at the corner of two busy isles. Keith Johnson dropped in at the December show and helped with the table (and sold a burner)... Eric Land and Jim Jordan will join me at the table in April. I passed the hat and collected money to cover table fees for both shows.



CRAIG MORGAN was first up – several years ago he'd made himself a file guide, but he'd been looking for a new one. He brought in one he purchased from Texas Knifemaker's (see links at end of newsletter) which has a carbide insert “so that you can not only hand file but can run it up against the side of the grinding wheel for doing tang work or plunge cuts. It wasn't cheap ... but it should last.” *I believe it was Erik Land who chimed in that he got one a while back and runs it up against ceramic belts – works great!*



The file guide is clamped onto an area that you **don't** want ground on (such as the ricasso) to protect it

while you grind next to it (e.g. the plunge cut – or the tang shoulders).



JOVE LACHMAN-CURL shared a few items, the first of which was a classic pocket knife “that my mom found lying on the street in Bristol many years ago...”



There's a gas street lamp stamped on the main blade.

Next he passed around a block of curly holly that he saved from a holly tree his dad had harvested from a stone wall at his home in Ireland. The ripple in the grain looks like this will make some stunning knife handles! Jove indicated that the tree was a couple of feet thick and that it had been coppiced once. There was some discussion of how the ripple in “curly” woods is formed – like at the butt swell. And the need to remove the bark from holly and dry it relatively quickly to keep the unusually white wood from taking on a murky, grayer color.



Lastly Jove passed around a kitchen knife he has in progress (1095).



MARTIN BRANDT got up to share a piece he's working on for a "knife-in-the-hat" group trade that's running in the Knifedogs forum (see links at end of newsletter). The challenge for this exchange was to make a one-piece knife almost entirely by forging with minimal filing or grinding. Martin made a swage block to help in thinning down the handle end – which will be curled around as shown in his drawing:



The handle material is blackwood and elk antler. The spine is filed for better tactile control when cleaning an animal.



MIKE JOHNSTON was next up – and started by referring to a notice from Don Hanham of Northwest Knife Collectors urging those folks to “support them [OKCA] like they've supported us!” *Which is pretty darn nice of them. Note their Kelso show schedule in the “Notes And Reminders” section below.*

Then Mike shared a knife he was commissioned to make at the last Kelso show. It's made out of circular saw steel. He used a variation of Lynn Moore's method of making dovetail bolsters, using a disk sander with a guide that he clamped at his desired angle. Mike just held the pieces to the guide and pushed them into the sander and it worked. (see the July-August 2013 newsletter for Lynn's description of the process:

http://www.elementalforge.com/5160Club/201307_08Newsletter.pdf)

Mike talked about being sure that the two bolsters were precisely matched before moving on. Craig noted that you could start with double-wide material (for both bolster and for the scale) – get the angle ground just the way you want it – then cut the material in half to create the front and back bolsters and scales.

At one of our meetings many months ago Mike had demoed how he applies clay for a hamon on several blades. This time he brought in one of the finished blades. He again described the claying process that was used on this blade. See the February 2014 newsletter for details:

<http://www.elementalforge.com/5160Club/201402Newsletter.pdf>

The blade is 1080. The clay is Rutland Furnace Cement 2700°f – from Ace Hardware. Mike heats the blade up with a paint stripper heat gun before applying the Rutland so it will stick better. He typically grinds the blade to 120 or 160 grit before hardening.



The blade was quenched in about 3 gallons of 120°f canola oil – straight in, point first.

For a description of his claying/hamon development process in his own words, see the last link in “Notes And Reminders”, below.

He noted that he hasn't had a problem with knives warping since he started claying his blades.

Mike was inspired by a Knifedogs forum posting where the maker starts revealing the hamon with vinegar, using a 5 micron powder to remove the oxides (15-20 repetitions) – then moves on to lemon juice and repeats the process, going to 3 micron powder. One guy likes to go back and use 9 micron powder on the lighter steel at the edge to make it sparkle. Mike did some internet searches to find that the abrasive in his toothpaste is about 9 micron. Flitz polish (auto store) is 3 to 3.5 micron. Mike decided that two out of three ain't bad and used Flitz to remove oxides from vinegar and lemon juice – and a final toothpaste scrub on the light metal at the edge.

This knife is named the November Mistress “because my wife said she didn't get to see me much in November because of it.”

LARRY CRITESER got up briefly to tell a tale of woe. The knife he'd brought in a few months before had served his customer well in a hunt. But. When he got home his wife threw it in the dishwasher. “The bead looks like hell, the blade – which is 1095 – looks like hell...” So Larry has some new work cleaning it up.



There was some general discussion about flat grind versus primary/secondary grinds... with a general feeling that a thin flat grind left the edge somewhat fragile. And we talked about the presence or absence of a guard or other feature to keep the hand from slipping from the handle onto the blade.

From there ideas and experience were bantered around about sheath design to avoid loosing the knife. And the experience of some of our folks who served in Vietnam about how fast canvas or leather sheaths – and knives themselves – deteriorated in that environment. Someone pointed out that wooden sheaths with openwork are traditional in that part of the world.



The handle is African blackwood, black spacer material, with elk antler for the main portion.

To secure the butt cap mike brazed a threaded sleeve on the tang and used a bolt through the butt cap to tighten it all up. He did file work on the bolt head.



The sheath has an inset piece... and Mike couldn't find a mushroom shaped stud – so he made his own.

A new member, **ROBIN**, stood up next. He's a welder by trade – just getting into knifemaking.

After the last meeting he went to Wayne Goddard's place... got some pointers... got some tools... and got one of Wayne's books. Now he's hooked!



He made himself a venturi forge. He's got access to

an anvil through a family member. It sounded like they had fun just playing with fire, steel, and hammers. He can buy old files cheaply from work – so that's what he's been using for his first knives:



He got a good amount of advice on how to proceed with these blades – as well as on forging and grinding in general. How to pre-form the steel before shaping the knife. How forging the main bevel makes the tip swoop up. How to correct that with a schwocking stick.

Mike mentioned using a disk grinder to take off the scale. Martin recommended an angle grinder with a 4" twisted wire cup brush for the same purpose.

And of course he got advice on aspects of heat treating. Enough to boggle anybody's brain! For making knives from files it was recommended that he bring the blade up to non-magnetic heat, then quench in oil (e.g. canola oil). Heat the oil to 120-130°F before quenching. Martin recommended tempering at 450-475°F.

Mike recommended sticking with one type of steel for the initial learning curve – so you don't have the added confusion of jumping from one type of steel to another. Especially when it comes to heat treat.

There was general discussion of the merits of various steels.

Mike relayed that Bob Kramer confided that he feels he gets an extra two points Rockwell by going from the quench into liquid nitrogen. And that is generally what is reported on the boards – particularly for steels with complex chemistry. An alternative to liquid nitrogen is dry ice and acetone or dry ice and alcohol. I've heard that the acetone mix is sticky and more dangerous – not to mention the acetone fumes. Use extreme caution with any cryo.

There was general discussion of how quenching mediums work, and engineered quenching oils like Parks 50. Vapor barriers, stages of the quench, etc.

Frank Bobbio mentioned a study comparing simple vegetable oils versus engineered quench oils. The upshot was that initially a vegetable oil performed as well as an engineered oil for their tests – but that over many uses the vegetable oil started breaking down and eventually would not perform as well.

The point was made that we don't keep our quench oil continuously heated like it would be if it were used in a commercial operation.

I believe this 372kb PDF file is what Frank was referring to – I have not read it yet:
<http://www.jpsr.org/Download.aspx?ID=5692>

Jove mentioned a study in India where they had success using a few percent of corn starch in water for a quenching medium!

Mike noted that he's used an old turkey fryer (that wouldn't get above 140°F anymore) for a quench tank. He also said that school cafeterias sometimes throw out deep stainless steel steam table pots when they get burned food on the bottom... perfect for a quench tank.



NOTES AND REMINDERS

OKCA April Show – April 10th (members only), 11th & 12th (public). This is the big annual show of everything that goes CUT. Display tables, sale tables, demos, lectures, supplies, books, factory knives, handmade knives, swords, axes, flaked stone blades, you name it. This year's theme is *Japanese Blades & Kitchen Cutlery*. Show info can be found at:
<http://www.oregonknifecub.org/okcshow.html>

The **Western States Blacksmith Conference** will be held in Hollister, California (just south of the Bay Area) April 23-26th: <http://www.westernstatesconference.com/>

The **Northwest Blacksmith Association Spring 2015 Conference** is scheduled for May 15-17 at the Cowlitz Expo Center in Longview, Washington: <http://blacksmith.org/events/nwba-blacksmith-conference-2015/> Check their calendar for mentoring sessions and class schedules.

The **Northwest Knife Collectors Kelso Show** will be September 26-27 at the Red Lion conference center in Kelso. Watch here for more details: <http://www.nwkc.org/home.html>

The **ABS California Hammer-in for 2015** will be in October – College of the Sequoias – Tulare, California. Watch the ABS forum thread for details: <http://www.americanbladesmith.com/ipboard/index.php?/forum/23-abs-hammer-ins/>

Martin Brandt mentioned during the meeting that he has **1050**, **1065**, and **5160** for sale. For the moment he also has **ITC-100** heat reflective coating for forge interiors – he bought a gallon and is reselling the extra in pints.

John Emmerling shares a forum posting from Rick Marchand on his method of **straightening during the temper** that's well worth a look: <http://www.bladeforums.com/forums/showthread.php/838681-Straighten-During-The-Temper>

Frank Bobbio sent a note that he is putting up **Roxul** (rock wool) bats in his shop for insulation, sound deadening, and fireproofing. That's an interesting alternative to fiberglass. 2300°f rating.

Mike Johnston sent this photo and note: "This knife is a EDC knife commission for a customer who has 3 of my knives. It is for his girlfriend's birthday this month. Blade: 3" forged 1080 with clay heat treatment and some filework on spine. Copper guard, stag spacer, purple heart handle and a "[Sally](#)" mosaic pin. OAL 6 1/4", Weight 1.8 OZ Per the buyers request, the sheath is made to be worn on the belt, hanging from the neck tip down or tip up. It's hard to see the two oles in the top of the belt loop for a neck thong."



Mike also responded in detail to a question about how he does his **claying and hamon development**. I've put it in PDF form in the 5160 Club newsletter archive page. It's well worth a read: <http://www.elementalforge.com/5160Club/MikeJohnstonClayHamon.pdf>



Wear your safety gear – no loose hair or clothing in the shop – and have fun!

Keep Well ~ ~ ~

Your Scribe

~ ~ ~ Michael Kemp



FREE DE-CLASSIFIEDS (IN NO PARTICULAR ORDER)

Email me a brief description of what you are selling/buying/looking for with your preferred contact (phone/email/...). Unless you let me know you want a shorter run, I'll run the note for 3 months and then send you an email to see if it's still valid. It's free – email me at Michael@ElementalForge.com

No entries this month – send me a email if you have something you want put in.



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 the big knife show in April – if you haven't seen it you've been missing somethig 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

Knifedogs Forum
<http://knifedogs.com/forum.php>

Bladesmith's Forum aka Don Fogg Forum
<http://www.bladesmithsforum.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/forums/forum.php>

REFERENCES

Many of the sites linked under “Knife Maker General” have book & video sections.

Our own Wayne Goddard's books are available at Amazon:
<http://www.amazon.com/Wayne-Goddard/e/B001JS9M10>
And you can email Wayne directly for his DVD at wgoddard44@comcast.net

Verhoeven's Metallurgy For Bladesmiths PDF
<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

My “Knife Info” has some knife musings and cheat sheet charts – plus Oregon and Eugene knife laws:
http://elementalforge.com/tips_notes/

OREGON KNIFE MAKING CLASSES

Gene Martin offers personal instruction at his shop south of Grants Pass for a daily rate.

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

Michael and Gabriel Bell offer a constant 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.

<http://www.cartercutlery.com/bladesmithing-courses/>

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/>

KNIFE MAKER GENERAL

Knife kits, steel, tools, machines, supplies such as handle material, fasteners, belts, glues, finishes, etc.

Jantz Supply

<http://www.knifemaking.com>

Texas Knifemaker's Supply

<http://www.texasknife.com>

USA Knife Maker's Supply

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

Knife and Gun (K&G)

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

Alpha Knife Supply

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

True Grit

<http://www.trugrit.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://sb-specialty-metals.com/products/knifesteels>

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.pmtsco.com/tool-die-steel.php>

EQUIPMENT

Beaumont (KMG) [Ohio] – the industry's 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

<http://www.2x72beltgrinder.com>

AMK [Ohio] – affordable grinder, quick-change between platen & contact wheel

<http://amktactical.com/>

Coote [Port Ludlow, Washington] – affordable, simple grinder – you supply the motor

<http://www.cootebeltgrinder.com>

Grinder-In-A-Box – grinder kit, assembly required

http://www.polarbearforge.com/grinder_kit.html

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/>

Quick and Dirty Tool Co. [Auburn, Washington] - will build Spencer/Clontz style tire hammers

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

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>

FORGE & REFRACTORY

Chile Forge

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

Mankel Forge

<http://mankelforge.com/forges.html>

High Temp Tools (scroll down the page for the category buttons)

<http://www.hightemptools.com/supplies-mainpage.html>

Omega – thermocouples & measuring equipment

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

Auber – more thermocouples and controllers, etc.

<http://www.auberins.com>

Hybridburners – home of the venturi T-Rex

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

Pine Ridge Burners – for ribbon burners and all associated fittings, blowers, valves, etc.

<http://www.pineridgeburner.com>

Zoeller Forge – low cost venturi & parts: Z Burners

<http://zoellerforge.com/>

BLACKSMITH

Blacksmith Depot

<http://www.blacksmithsdepot.com>

Pieh Tool

<http://www.piehtoolco.com>

Centaur Forge

<http://www.centaurforge.com>

Quick and Dirty Tool Co.

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

LOGO/ETCHING

Ernie Gropitch – Blue Lightening Stencil

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

IMG International Marking Group

<http://img-electromark.com/>

Electro-Chem Etch

<http://www.ecemmi.com/products.html>

OTHER GOODIES

Sally Martin Mosaic Pins – So. Oregon

<http://customknife.com/index.php?cPath=13>

Burl Source – handle blocks/scales – So. Oregon

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

Gilmer Wood – N.W. Portland

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

Oregon Leather – 810 Conger Eugene and 110 N.W.
2ND Portland

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

Coyote Steel – misc., 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/>