

☿ EUGENE 5160 CLUB ~ APRIL 2014 ☿



## APRIL MEETING

The 5160 Club will meet at Woodcraft of Eugene (Delta Oaks – Beltline & Delta Hwy) April 3<sup>rd</sup> at 6:00 pm. Show & tell & pass-arounds.

We will also make any final plans for the OKCA Show: <http://www.oregonknifeclub.org/okcashow.html> I've got two folks lined up to man the table with me (Erik Land and Jerry Davis) but if you are interested there should be room for a couple of others to spend some time behind the table over the weekend - talking to folks or hawking their knives. This year the 5160 table location will be M-10.

Friday April 11<sup>th</sup> is OKCA members only: metallurgy presentation at 8am; show opens 10am; custom knife competition submissions 2 to 3pm; show closes 7pm.

Saturday the 12<sup>th</sup> – 7am opening for table-holders 8am-5pm for the public.

Sunday the 13<sup>th</sup> – 8am opening for table-holders 9am-3pm for the public.

All days are free to OKCA members – Saturday & Sunday are open to the public @ \$6/day.

OKCA memberships are on sale Friday at the show entrance AFTER 2:00pm – get yours ahead of time!



## MARCH MEETING

**WAYNE GODDARD** started the meeting by relating how – when he needed a chisel to mark steel so that 5160, W-2, etc. could be identified in the progress of a class at Old Washington – he had made a chisel from a large ball bearing – and used “the old-fashioned blacksmith temper” of quenching the business end of the chisel – then letting heat from the shaft of the chisel creep down far enough to temper the cutting edge. Wayne has his own code of marks to identify bars of 5160, 1084, W-2, etc.

Wayne guided a discussion of Bowies: historical, classic, and modern. Holding up a well used old knife Wayne prodded “This is a butcher knife – so you couldn't use it as a Bowie knife, could you.” Walter Hardcastle got general agreement to his comment: “Well it's made to cut meat – so yah!”



The “Sandbar Fight” knife was probably very similar to the “Edwin Forrest Bowie” knife pictured here:



I know I've put photos of these knives in the newsletter before – but I can't resist repeating a good thing – Wayne passed around his version of the Edwin Forrest Bowie:



And another in the Bowie/butcher/camp knife range:



And his “Spacer-Man” in the classic Bowie style with Wayne's signature look – and his mustard finish.



Wayne used his “Spacer-Man” Bowie to illustrate the benefit of putting a little curve into all the lines of your knives.

Wayne passed around a selection of garage sale finds to spark some discussion of auto knives and of the new rules on ivory.



Everyone's probably aware of the new U.S. rules on elephant ivory. IMHO it will be demanding too much of a government employee to expect him or her to be able to tell various ivories apart. And the guidelines on proving that a piece of ivory is “antique” are not easily met. Here's a note from Blade Magazine: <http://www.blademag.com/blog/steve-shackleford-blog/feds-ban-elephant-ivory>

**ERIK LAND** was up next – showing is solution to the touchy job of peening rivets without damaging knife scales. Erik makes folders, so this is a recurring issue!



One day he glanced at a shiny ball bearing sitting in a

drawer in his shop and realized “that'll work really great!” - he also had a piece of brass water pipe fitting that he machined the inside diameter just undersized. He put the ball bearing in the freezer – heated the brass with a hot air gun – put the two together and “whacked it once real hard with a leather mallet, and I don't think it's coming out!”

Erik reports that it works great to peen against without marking the scales. It's “heavy enough” but he has a larger ball bearing that he's going to make another round peening anvil out of.

Erik shared a new folder design – O-1 steel with burl maple and “bird's eye” washer pins. He shared another folder of the same pattern that was “jinxed” with all sorts of issues during making – but it now is a serviceable shop knife.



Erik passed around two in the pattern below – this is the Kevlar handle – somehow I missed photographing the snakewood version.



Erik discussed using carbide blocks to make defined, even plunge lines – and shared his discovery of “Rhino Fingers” which protect your fingers from the heat of the blade while grinding – but still give you tactile feedback as you grind.



Erik bought these through the Knifedogs forum (see web links at end of the newsletter) – from Westside Sharpening & Cutlery Center aka Rhino Knives: <http://www.rhinoknives.com/styled-3/index.html>

“Unfortunately they're a little expensive, they're \$18 for four fingers” (*\$19.95 with s&h per the web page – made in the U.S.A.*) “Two that will fit your thumbs and two that fit you fingers... I cringed when I bought them but I'm a believer now – I'll buy another set.”

Erik's last note was to offer a sack of copper rivets for sale. (it sold quickly)

**BLAIR GOODMAN**

stepped up next with a hunting knife that his brother gave him. He told colorful stories about his brother and though his brother claimed it was a blade that they “found” when they were kids, Blair offered more adventurous origins as more likely where his brother is concerned!



Blair noted that his brother shaped the guard and handle using a Dremel he picked up from a 2<sup>nd</sup> hand shop near a military base (soldiers jettison gear when moving to new bases etc.). And his brother hand made the sheath. “So it goes to show you don't need fancy equipment to make a knife!”



**LARRY CRITESER** shared a knife he bought from Gene Martin back at the 2009 OKCA December Show. Harley-Davidson chain Damascus. Quite a nice looking knife with a solid sheath – and it was featured in the 2003 issue of “Knives”.



I stepped up next to share my first layered pattern welded blade – a small kitchen utility knife made in a profile that's been rattling around in my head for a few years.



That's 1095/15N20 in the blade (theoretically the billet would have had over a thousand layers – but with all the loss to scale and grinding I'm thinking the blade wound up with one or two hundred layers). That's a maple handle treated with coconut oil, and one of Sally Martin's mosaic pins.

**MARTIN BRANDT** got up next (handing off some wood blocks to Mike Johnston). Conversation about curing wood led into Martin's recent go-rounds with the city about moving his curing wood and other supplies off his lawn – he's working on compliance but it's taking all his spare time to make the city inspectors happy. Once they're on your property one thing leads to another. There's lots of odd rules and regs – and ignorance is no excuse. For instance, a strict interpretation even bans having a compost pile. Dealing with the inspectors sounds Kafkaesque.



Martin shared a knife he's been working on - "I've been having a learning curve with elk antler - you buy what you think is good solid antler and when you cut it up you find out the skin is about 1/8" thick!" The main part of the antler is porous. So to make it more solid Martin saturated the inner side of the scales with superglue. "You've got to be careful when you're

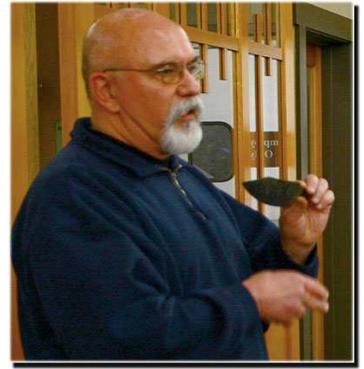
using superglue not to let it get on the face of the scale... and another word of advice: stain it first just in case you do get some superglue on the face."



Martin has some supplies (like an industrial roll of 00 steel wool and some photinia wood) for sale to make room in his shop for his compliance project.

Next up, **MIKE JOHNSTON** showed us the results of the clay backing – hamons he demonstrated for us at the January meeting!

On the larger of the blades, after hardening in canola oil, Mike just scraped the clay off – and on the back (right) side ran it down to 400 grit. Then tempered it with a jig – got it good and blue at the spine, gold down near the edge. As a test etch he rubbed a rag with ferric chloride on the 400 grit side. Mike says that the copper that you see got transferred from a grinder belt!



On the smaller knife Mike went ahead and finished it down to 2000 grit and did multiple etches in ferric chloride (with 0000 steel wool rubs between etchings). I got a better photo of this one:



Mike also passed around a knife made from a Ford coil spring – with some curly maple from Martin. Mike noted that "as I was forging it just decided to be that shape [leaf shaped]."



And a knife he'd shared in January: ... again from Ford coil spring – with African blackwood and Goddard deer antler handle.



Next Mike passed around a new one with a blackwood spacer in the handle – and aluminum bronze fittings – very nice:



And Mike hopes to get “The Big Sister” done for the April show – spring tooth harrow - “Quenched in canola oil (120f) it’s just crazy hard.”

Last up from Lynn was a forge welded cable piece from logging cable. He recounted his efforts to get the cable to weld rather than unravel.



**LYNN MOORE** shared some knives-in-process. The OKCA club knife is from the provided 1095 blank – with silicon bronze S guard, plastic spacers, and that looks like maple to me. The gap at the guard is because it is in process – it has yet to be pressure fitted.



**JIM JORDAN** showed us a knife that he got from a thrift store – and in the process of putting a new handle on it and cleaning it up he sees signs that it may be “shear steel”. Prompted by Wayne, Jim recounted how shear steel is when they would put raw iron in a heated crucible with a carbon source to

make steel – but the process would not be consistent – and they would fold and forge weld the steel to mix the high and low carbon areas better. Here’s Jim’s beautiful walnut handle on the old blade:



Next up was a stainless blade with copper bolster, hafted in mountain goat horn! Lynn relayed his challenges and work-arounds on both blades – including having the buffer grab and throw part of the goat horn knife across the room. *Scribe’s note: I’ve heard so many instances of the buffer grabbing and throwing knives that I’ve gone over to making small buffing wheels for my flex-shaft tool rather than using a standard buffer.*



Jim’s on a roll with creative handle shapes – he took the tip of a fluted sharpening steel and made a push dagger with a palm-fitting handle:



And last up – a blade from Picc-A-Dilly flea market that he repurposed with a handle designed to help a disabled person hold the knife in a secure manner:



A new 5160 club member – a shop teacher in Yoncalla who will retire after this year – got up and recounted how 10 or 12 years ago he'd asked the school board for permission to start a knife making class – which they agreed to with tight regulations. Prefacing what he said next with the thought that your failures make a better story than your successes, he recounted how one student had put his soul into shaping and grinding a blade for 3 months – to have it warp in the quench. Our shop teacher said “no problem I'll just straighten it out” and as the hammer was coming down he thought “Peterson you idiot” and it snapped into three pieces. Welllllll he apologized to the student, made a blade to the same dimensions as the broken one and the student could go from there. And the lesson indelibly learned!

Peterson then shared some other tales from his knife class about school rules – and one kid who insisted that he wanted to make a knife out of S30V (instead of their normal bandsaw steel). *Scribe's Note: Somehow I think the heat treat for S30V would be beyond the scope of standard shop class!*

Another new 5160er recounted how he'd met Wayne Goddard at the 1973 Lane County Fair when his wife recognized Phyllis Goddard from their grade school years! He then recounted how he'd talked Wayne into giving a presentation to his grandson's Boy Scout troop. One troop member he'd given Wayne's video to had pulled a spring off his dad's boat trailer (?!?!?) and turned it into a knife that won a blue ribbon at the fair! His grandson and this other kid are both stoked about making knives – and grandad is helping them set up a forge and shop. \$50 Knife Shop style.

Both of the new 5160ers encouraged folks to give demos to shop classes and Boy Scout troops and encouraging the value of making something with your own hands.

Mike Johnston related a story from his school-bus driving days. He had one student who was truly a problem child. “So much so that his parents went to live in Arizona leaving him behind.” Mike kept him sitting directly behind the driver seat so he could keep an eye on him. And he'd strike up conversations with him. When the kid learned that Mike made knives, he asked Mike if he could make a knife with him for his senior project. Mike agreed if the kid could get the approvals. “By golly if this kid didn't.”

For three months, three days a week the kid came to Mike's shop. “This kid was dedicated. His first knife looked at least as bad as my first knife.” One-brick forge and draw filing. “He must have made six knife blanks before he was done.” He got a great grade on his senior project. “He actually graduated – that was just phenomenal in itself!”

“And maybe some day I'll get my \$50 Knife Shop and Wonder of Knifemaking back from him ... but you know, I'd give them to him again ... doesn't bother me in the least.”

~ ~ ~ and with that the meeting broke up into informal discussions. Another great meeting!



## DANIEL HINES' DAMASCUS ETCHING METHOD

*I got the following email from a 5160 subscriber - chiming in with what he's found works best for him in bringing out the pattern in Damascus. IMHO it's great to know that there are many ways to skin a cat (as the old politically incorrect saying goes)!*

Mr. Kemp I have been building custom knives for about 40 years now and forging my own Damascus since 1987 and credit a lot of my learning to Mr. Wayne Goddard and my degree in Metallurgy. I read the news letter concerning etching Damascus steel and thought that I would pass along some further

information that I have gathered from constructing and etching approx. 750+ Damascus knives.

In order to attain a good clean etch I sand all of my blades by hand or otherwise thru 800 grit. I keep my etchant in a 3in. PVC tube approx. 30in. long and capped on the bottom and hung on the wall along side another tube of the same size that is filled with distilled water and TSP (*Trisodium Phosphate*). My etchant is a mixture of 1 part ferric chloride and 2 parts vinegar and I only etch in a warm solution of 75+deg F. Both tubes have plastic tubes in them that extend to the bottom and are connected to an aquarium air pump so the knife can have etchant or neutralizer bubbled up past it creating a frothing action.

The knife is removed from the etchant about every 5-10 min. and rinsed in water and rubbed with a tooth brush until you have the etch that you are satisfied with then it is placed in the tube with the TSP and neutralized. As a footnote use about 1+ cups of TSP to a full tube of water, also I have forgotten about knives and left them in the TSP for up to 2 weeks and never found any oxidation (rust) on the blades while immersed in the neutralizer.

Sorry that I'm such a long winded old timer but that's just the way I am good luck and I hope someone finds this useful.

*Thanks Daniel, for chipping in!*



Keep well – wear your safety gear – and have fun!

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.

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**For Sale:** I live in the Riddle Oregon area and have a large squirrel cage fan that came off a wood stove that I would like to trade. It would work great for making of a forge. This is wildernessman Dan Hines saying keep the steel hot and making those hammer blows work good. [wildernessman56@yahoo.com](mailto:wildernessman56@yahoo.com) or by phone at 541-817-6215.

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**For Sale:** I have a TW90 grinder with all the goodies: surface grinder, 8" and 10", 70 Duro wheels, small wheel attachment with most sizes, 3 work platforms, and 10" platen. It's wired for 110 but can be 220. According to Travis Wuertz I should be asking \$5,000.00 given that there is right at \$6,000.00 invested - and it would take 90 days lead time from the time you pay for a new one plus \$300.00 for shipping. So \$5,000.00 seems fair to me. It's almost new. I have only made a few knives with it! contact Ben Davis 1-541-423-5216 – located in Central Point, OR.

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**Knife Maker Wanted:** Mike Lummio of Bushcraft Northwest is looking for a new knife maker that is familiar with scandi grinds and bushcraft knives. If you are interested, contact Mike at [www.bushcraftnorthwest.com](http://www.bushcraftnorthwest.com) (360) 606-1036 or [mike@bushcraftnorthwest.com](mailto:mike@bushcraftnorthwest.com).



## 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>

## FORUMS

Knifedog 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](mailto:wgoddard44@comcast.net)

Here's a few other useful references:

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](http://www.tempil.com/wp-content/plugins/download-monitor/download.php?id=Basic_Guide_to_Ferrous_2010.pdf)

## GENERAL TOOLS & SUPPLIES

Woodcraft Eugene – special thanks to Joe & the crew! 1052 Green Acres Rd Eugene, OR 97408 (Delta Oaks Shopping Center) 541 685-0677

<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/>

## 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/>

## **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/>

## **KNIFE STEEL SOURCES**

New Jersey Steel Baron

<http://newjerseysteelbaron.com/>

Niagara Specialty Metals

<http://www.nsm-ny.com> (click Products/Knife Steels)

SB Specialty Metals

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

Bohler Uddeholm

<http://www.bucorp.com/knives.htm>

Pacific Machinery & Tool Steel – Portland, Oregon

<http://www.pmtsc.com/tool-die-steel.php>

## **2X72 BELT GRINDERS**

Beaumont (KMG) – the industry standard

<http://www.beaumontmetalworks.com/shop/>

Travis Wuertz – premium brand

[http://www.twuertz.com/Home\\_Page.php](http://www.twuertz.com/Home_Page.php)

Pheer – affordable, satisfied customers on the forums

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

Coote – affordable, reliable – you supply the motor

<http://www.cootebeltgrinder.com>

Grinder-In-A-Box – low cost – assembly required

[http://www.polarbearforge.com/grinder\\_kit.html](http://www.polarbearforge.com/grinder_kit.html)

Wayne Coe – grinders, motors, VFDs, etc.

<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/>

True Grit – grinder belts

<http://www.trugrit.com>

## **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>

## **LOGO/ETCHING**

Ernie Gropitch – Blue Lightening Stencil  
<http://www.erniesknives.com/>

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

## **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>