

The One And Only Monthly Newsletter of the Eugene 5160 Club

October Meeting: Thursday the 7th - 6pm – Woodcraft store on Coburg Road



Well there's my excuse for not being at the September meeting: I surprised Danita with a couple of nights at the Crater Lake Lodge in celebration of our ten years together. We had a great time – this shot is from a crater rim trail about 1,500' above the lake. That little white smudge in the lake foreground is the tour boat.

And while I was gone I missed out on seeing one of the greats in knife design. I'll just pass on the photo below and the notes from Mighty Mike with some *additions from Jeff Crowner* and *a comment or two from yours truly*.

You should also find your copy of Wayne's World attached to this email.

***** Bring your Wayne Goddard book(s) to the meeting Thursday and get in a group photo for Wayne's updated version of “The Wonder of Knifemaking” - - I know I've got a couple of books and a video – I'm bringing 'em all *****

Wayne's lined up a speaker for Thursday and if he has time he will also do a demo himself!

At the bottom of this newsletter is a “for sale” item – I believe that in the future these will find their way into Wayne's World... so if you have something to put on the block, let Wayne know!

So without further ado, here are Mike's notes:

Wayne spoke of setting a date to all meet at Ray Richard's shop on a Saturday in the future.

Guest speaker: William W. Harsey



Bill said that Wayne was the first person to show him how to use a belt sander. Bill started welding at age 15, working in his fathers shop in the logging industry. Bill started forging woodworking tools and showed a draw file and a curved gouge. *He first started with making Scandinavian draw knives and log cabin making tools. One of the reasons that Bill started to make blades was to get out of the timber industry.*

Bill then asked for a moment of silence for the passing of Bob Loveless earlier in the day.

Wayne was the first knife maker that Bill met and had a huge influence in his subsequent career.

The first job in knife making Bill had was working with Al Mar. Bill said they would make wooden models of knives to send to Japan with the design drawings. Bill would make the blade from one type wood, the bolster from another and handle from a third. Each of the types of wood would contrast to make it easy for the manufacturers to understand the design for manufacture.

Al Mar introduced Bill to Rex Applegate for whom he worked grinding many of Applegate's knives. Bill took the Applegate/Fairbairn knife and developed a folding knife from the design. Bill said it was a lot easier to tell Applegate what he had done after the fact than to ask for permission before hand. Bill brought Butch Vallotton into the design and manufacture of the folder. Butch was the one who developed the thumb stud as the stop on the folder.

Small World Department: Some time after I seriously caught the bladesmithing bug I was making small talk with my dentist (why do they do that when they have a drill in your mouth?) and found out he's Rex Applegate's grandson! I am happy to say that the grandson does not use Rex's close combat methods in the dental chair. "Kill or Get Killed" is not what I want to hear from my dentist.

Bill is currently working with Chris Reeve of Boise Idaho (<http://www.chrisreeve.com>). Bill worked to design the Yarbrough Knife Project for the Green Beret. A total of 10,000 units were produced in that contract. Maybe ten contractors submitted prototypes for this contract and Bill's was the only one that met the standards. Bill said it's too bad that some of the manufacturers that did not win the contract had to resort to breaking the

Yarborough knife with an 8 pound hammer, then bad mouthing the knife as being a defective design.

The Special Forces Group wanted a different knife with a shorter and wider blade. The steel used is CPMS30V which doubles the strength of 154CM. The blade is finished with KG Guncoat baked finish. The handle material is phenolic canvas micarta.

The military Ft. Bragg knife project has a “Flat Dark Earth” coating that is zirconium nitride which is 5-6 microns thick with an approximate Rockwell hardness of 80 to 90.

Boker is now produces a 5 ½” AF double grind dagger that Bill designed. Bill wondered why Boker sent him back the prototype knife, and then realized it was a production knife, not the prototype.

Bill said he does all the prototype work on all the military knives produced at Chris Reeves Knives, working in his shop in Creswell, Oregon. Bill also works on many of his own knives there.

All this began because Bill had a forge and wanted a knife to go fishing with.

Bill suggests “Keep it simple and stand behind it”. Bill doesn’t subscribe to any knife publications and only buys a copy when there is a need to. He doesn’t want to see what everyone else is doing in knife design. Bill wants his designs to be his own. That’s one of the things that’s wrong with knife design. Designers with a CAD program have never put the knife in their hand.

Bill starts making his knife by making drawings. He then converts the drawing into a Lexan or Polycarbonate model. Wood also works for making a model like he did with Al Mar’s knives. Bill said he doesn’t design at the grinder. He makes prototypes to make sure the design feels good. Refine your own design, it will show.

Bill talked about CPMS30V. *He stated that Chris Reeve suggested and had a hand with the development of S30V.* Blades are brought to 1550 Degrees F for 1 hour, and then brought up to 1900 degrees F. The blades are then flushed with an inert gas then given a 300 degree F “snap temper” for 1 hour. The blades are then cryo treated in liquid nitrogen then given 2 tempers at the low temperature of 650 degrees F.

All the Chris Reeves knives are heat treated at a company that manufactures blade for the food industry in Boise.

Bill showed some of his knives. A titanium scale folder and a master pattern folder that acts like a fixed blade. This folder was designed for the Spec Op’s groups because of the need for weight reduction as well as a need for compactness. The sheath is built so that the knife rides mid-point on the belt or where ever it is mounted.

The military knives focus on both edge holding and ease of sharpening. Bill said he sharpens these knives in the field differently than he would in the shop. The spine of the blade is held against a fixed object and a sharpener such as a diamond hone is worked across the edge.

When stropping a blade in the shop, Bill uses 2 pieces of leather laminated together. He uses WD40 to wet the strop and applies Green Chrome compound.

Bill said he uses Norton Blaze Orange belts from True Grit Supply. When an order is made before noon, the order is sent out that day. He said he can grind out 7 big blades using one belt. Bill starts with 50 grit, then 120 grit Blaze Orange belts. Bill then switches to Trizac Gator belts because they can be dressed with a star wheel abrasive belt dresser, leaving no “bump” at the seam. Bill got a little side tracked and never finished what grit progression he uses on his belts.

Bill will grind blades to their finished dimensions before heat treating them with surface plates. When the blades are oil hardened, he grinds the blades to 80% dimension.

Bill showed his “shirt pocket knife” that he carries. It is a ½ frame folder that is very light.

One of the coatings being used on the military knife blades is a titanium Nitride coating by Body Coat at about \$17.00 per blade. This coating is applied at 400 F to 450 F which is below the tempering temperature. The military is working toward making all their equipment infrared neutral. This coating does that.

Bill was asked, “Do you like what you do”? His answer was, “I love the results”.

Bill said that he free hand grinds all his blades; however he is now using a flat table grind table with holding handle bars.

Bill discussed the difference in 154CM steel and CPM154 steel. The end result was that CPM154 is much tougher and easier to mirror polish than 154CM. Bill did say that even though CPM154 is a superior knife making steel, good knives can still be made from 154CM.

So, in closing, I missed out on meeting one of the best designers around of hard use and combat blades. My loss! And as Jeff notes – Bill also holds a Fine Arts degree from the University of Oregon – Lone Wolf Knives has a short bio: <http://www.lonewolfknives.com/store/pages/designers-harsey.shtml>

Last but not least, here's some for-sale items – the 5160 Club makes no claims on for-sale items, use your judgment and buy what you like!

Craftsman (Atlas) metal lathe 10 x 34: With follower and steady rest.

\$900.00

Import Mill-Drill with some end mills. \$700.00

Small bottle oxy/acetylene outfit near new, \$250.00

Contact Wayne 541-689-8098 for info.

And with that – I'll see you all Thursday with Wayne's books in hand!

Michael Kemp (Mossy Mike)