## South Fork 7-2-2012

The south Fork has evolved over about 20 years of my own use and from feedback from those who have used my custom knives. It is named after a mountain and valley area in Utah where I have hunted for Mule Deer and Elk. I guess you could call it a general purpose Sportsman, Working/ Utility knife. The edge sweep and trailing point make for an easy cutting geometry. The sharp point comes in handy for fine work like caping or removing a splinter or cactus spine. The belly sweep and slightly dropped handle position the blade in the hand for skinning big game. Some prefer a drop point or semi skinner for field dressing and skinning chores, but the trailing point has worked very well for me as well. Some will also prefer a shorter blade but again my preference is for a little more reach for boning out an elk quarter or removing the back strap. Some blade shapes are more efficient for specific field tasks but it is my humble opinion that the trailing point can cover a wide range of tasks easily. As this knife gets out in the hands of Sportsmen I think this will be proven out.

CPM S90V is a stainless steel so corrosion around salt water is not a problem given reasonable care. It can be used for rigging, rope cutting and general over all boat use. I have also used it for gill cutting on Tuna and Salmon to produce sushi quality fish.

It is not a true fillet knife but I have used it successfully to fillet salmon, halibut and tuna for example. Just cut down the lateral line to the center bone and fillet both directions to remove the top and bottom loins. Cut across the fillet for some ideal size steaks for the BBQ. It can double as a Camp, Canoeing and Back Packing knife. The thin geometry lends it to cutting and peeling vegetables and preparing meat cuts for the grill. I recently used it to bone out some pheasant breasts for a pot pie. It makes a great steak knife. Can it be used for self-defense? I believe so but will leave that to the experts in that area.

There are many other uses not described here but it is also worth noting what it is not intended to do. This knife is optimized for slicing and fine work. The thin grind, higher Rockwell hardness and high carbide metallurgy does not suit it for **heavy duty** Bush Craft type work. It is not intended for prying around hard objects like bone or for chopping. An ax and pry bar or heavy duty Bushcraft knife are the tools to use here.

The handle design has evolved so that the knife can be used in multiple positions. Blade edge up or down, choked up to the finger notch or positioned with the rounded butt in the palm of the hand. All corners are rounded so there are no hot spots to raise a blister during prolonged use. The handle material is G10, which is fiberglass cloth laminated with resin. It is very dense and will not absorb odors or liquids. The density makes it very durable and adds just enough weight so that it balances with a bias to the hand for good balance. The deep finger guard minimizes slipping during wet use. The handle slabs are bonded with epoxy for a liquid tight seal.

The blade steel is CPM S90V. The CPM (Crucible Particle Metallurgy) process allows for a very high percentage of very hard carbides (Vanadium Carbides) to be incorporated into this grade of steel. These particles enhance the wear resistance thereby optimizing the blade for long edge holding even when cutting very abrasive materials. (A detailed description of CPM S90V can be seen by viewing the data sheet at the Crucible Specialty Materials web site). Like all things in life there are compromises. Additional alloy and increased hardness do tend to offset ductility. As with all high alloy steels in this category some caution should be used to prevent edge chipping. I have used this grade in my custom knives since the early 90's. I believe I was one of the first to try it. It was developed as a specialty grade for the plastics extrusion industry. Molten plastic is very abrasive and corrosive so the criteria were to develop a grade to withstand these challenges. High abrasive wear and corrosion resistance qualities

sound like the ideal steel to make a knife blade with. The problem is the qualities that make it such wear resistant steel also make it a challenge to grind and finish. With some much appreciated help from metallurgists at Crucible Materials and a pretty long learning curve I was able to successfully make knife blades out of it. All high alloy knife blade steels require specialized heat treating. They require high temperatures, very precise control and rapid quench to get the maximum potential qualities. For these reasons CPM S90V has seen pretty limited use in the custom knife arena and almost no use in Production knives. Spyderco however has perfected the heat treat and grinding and finish processes for CPM S90V and is the only manufacturer so far that is using it for knife blades. I was very happy they made that choice for this collaboration since it will provide excellent performance over a wide range of uses.

One could ask with such high wear resistance on the South Fork blade, doesn't that make for very difficult sharpening? The answer is that it could-- and this is again another compromise in life. With this knife however the blade grind is relatively thin and that means very little material is needed to be removed to re-sharpen. The other positive aspect is that there are sharpening Medias available that will cleanly cut this very high carbide and high hardness steel. I recommend Silicon Carbide bench stones to restore the edge and then a ceramic or diamond stone as produced and offered by Spyderco to remove the edge burr. It does take practice to sharpen a blade like this by hand and eye and again the good news is that there are mechanical aids that make the task easy and quick.

The sheath provided with the South Fork is Bolatron ™ which is a thermo plastic that can be molded to the exact shape of the knife. Leather is the traditional sheath material and many still prefer that material but in the case of a working knife, Bolatron™ makes a lot of practical sense. I have gone to this material in my custom knives for the same reason. It is hard and prevents the blade from coming through the side of the sheath if inserted incorrectly. It also can be cleaned with soap and water if one day the knife is inserted in the sheath without cleaning after some game or fish processing. This material also does not absorb water as leather can. A knife put away in a wet sheath could be a sad story when it is discovered sometime later.

In summary I would say that the South Fork is a unique combination of high tech steel at a higher hardness and a thinner edge for easy cutting .The lines of the knife are pleasing and the overall refined design make for versatility. It should serve a wide variety of users and introduce a knife with some custom qualities that do not currently exist in a production knife.

Phil Wilson