

A NEW KNIFE DESIGN

I have a new knife series called the Bow River . It is interesting how a new design can come to be. I was working on a small drop point doing the final grind work before installing the finger guard and handle. I moved from 60grit to 220 grit to finish the flat grind when I noticed a small crack in the blade just in front of where the finger guard would be. I flexed the blade in my hands and was surprised when it broke in two. Damm ! A lot of work and materials wasted. I tossed it on the bench and walked away from it. The next day I took another look and said to myself why not just cut a slot in a block of micarta and epoxy the blade in and use it as a shop knife. I did that and came up with a 3/1/2 drop pt that was wider than normal due to the broken off length. It has a four inch handle with a rounded butt. The epoxy joint is now reinforced with 3 pins. It felt good in the hand-- compact and light. I made a pattern and completed several knives with different steels. The design has evolved some and five patterns later, a lot of rope cutting and some field-testing it all came together. This design is not particularly unique, there are many knives out there that are close but I had never made anything like it. At the same time, I was experimenting with using Kydex for sheaths. In the interest in keeping it all simple and lightweight, I thought to make Kydex standard for this design.

I always put a finger guard on my knives based on an accident I had many years ago with a slippery factory fillet knife. That knife handle was the same dimension as the back of the blade. It was easy for a wet hand to slip forward onto the blade. With this new knife, the wider blade extends down at the rear and all surfaces are rounded off. This serves as an effective guard. I have experimented with one modification on this new design. I incorporated an integral guard and finger notch like on my Bird and Trout design. This works fine and will make a few of these to have on hand but it takes away some from the original simplicity and compactness. I do get quite a few requests for a small compact knife--- so here it is.

This design specifically lends itself to ease of fabrication. The partial tang saves several inches of steel on each knife. This is important for Alloys like CPM 10V (expensive) and CPM S110V (very expensive and so far a rare commodity). I have no concerns about strength since the butt of the blade rests against the rear of the handle slot. To move the blade would have to rotate and shear the stainless steel pins. Mechanical strength calculations show that it would take more than 500 pounds of force before this configuration would fail. In addition, the blade and handle are epoxied together for strength and weather protection.

The wider blade allows for a very shallow angle flat grind that results in less cutting friction. Initial stock thickness will vary from 0.10 to 0.160 depending on the alloy. The spine is rounded off to eliminate any hard spots. The standard grind on the blade is 0.008 to 0.010 behind the sharpened edge. The final sharpening angle can therefore be a little steeper to provide for a stronger cutting edge. The over all simplicity means less fabrication time, less materials and abrasives so I can offer a very useful knife with premium steel and heat-treat for a reasonable price.

As I stated before there are some limitations to all functional design. First, I want to state what I think are the best applications for this knife and then look at what it would be less suited for.

This is a light duty utility knife that can be carried in a fanny pack or backpack. It is also compact enough to belt carry. This would be a useful knife to take on a picnic or day hike. It is especially suited for back packers who are conscious of that last ounce. This knife with a kydex sheath and micarta handle weigh less than 5 ounces. The wide blade is nice for sandwich making either on a picnic to slice the salami or to spread mayo or peanut butter. It would very nicely clean a trout, and be useful around a camp kitchen. You can take this knife to the steak house; it is small enough so that it does not attract undue attention when used for cutting the prime rib. It would be a very efficient skinning knife for medium game like antelope and deer. It would be a great back up knife for hunting larger game. The blade is a tad wide for caping but I think it would suffice. It is very efficient for boning out game in the field for a backpacking hunter. The thin grind is nice for kitchen use, slicing veggies and even boning out a chicken breast or leg of lamb. It would do a nice job of shaving a dry stick for fire tinder.

The blade shape can vary from drop pt, semi skinner and a trailing pt. All blade shape choices have about the same "belly" for cutting efficiency. The trailing point has a sharp pt that could be useful for dirt bikers or others who might get into a cactus and have to do a little first aid digging out spines. All blade shapes would be great for breaking down cardboard boxes and plastic bottles for re-cycling. Pruning and grafting work also come to mind.

This is not a knife for chopping or prying, it is just to light and thin. I do not make tactical knives so even though it is compact and would work for belt carry, I do not have the knowledge to recommend it for that use. It could serve as a primary hunter and I will be field testing it for that application in October this year on antelope.

I make this knife in the following steels:

CPM 10V
CPM 30V
CPM 154
CPM S110V
CPM M4

The base knife has a CPM 154 blade, Micarta handle and a Kydex sheath