

“The Perfect Survival Knife”

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- This topic is the Third Rail
- We will try and see what that description means
- Narrow down selection for your knife

First of all, I will say that what the “Perfect Knife” to one, is abhorrent to the next person. The knife is truly one of the most personal choices you will make on your gear list. To some, there is one knife; others may have several knives, each having a particular task to do. The first consideration is to think about how YOU will USE the knife. Once you can identify that, you can begin to narrow down your selection.

So let’s put the knife usage into general categories, those are:

- Chopping and Prying
- Sawing
- Fine cutting
- Animal processing
- Defense
- General Cutting

Let’s take a look at each of these categories in some detail:

- **Chopping and prying.** These tasks suggest a larger and heavier fixed blade. The blade will be used as a lever to pry things and the chopping, on various items from the small to large.
- **Sawing.** Some knives have saw teeth on the back edge of the blade. These in my opinion, is not something knives do particularly well and I lend it no weight. Sawing is far better done by a chain or cable saw. A separate tool like the Wyoming Saw is a great choice for this task and does yeoman’s work on animal bone.
- **Fine cutting.** This knife has a thinner, lighter and shorter blade, this could be a fixed or folded blade. Many “Neck Knives” have 3-4” blades, thin with full tang for small tasks.
- **Animal processing.** Remember the larger the game, the larger the knife. Squirrels for example would work well with a smaller knife such as one for fine cutting. Deer and elk, larger and heavier blade with good grips.
- **Defense.** This is where the design changes for the blade. Where a round point works fine for anything else, here it does not. You want a single or double edge with a pointed tip. This would be a fixed blade most of the time with enough strength to be used as a spear point.
- **General cutting.** This knife could be either fixed or folder. Lighter, thinner blade that are used for cutting cord, sharpening stakes and such other normal camp tasks.

You will have several other important choices to make. With respect to folding knives, those generally be for general use and have a standard grind and thinner blade.

But when it comes to fixed blade knives, there are other choices available, let's look at these:

- **Blade shape.** There are about 12 basic shapes in the blade. From the normal or curved shape to clip point, trailing point, drop point, spear point and tanto styles. For most uses, the normal and the trailing point is fine for general use. The spear point and tanto are more defensive blades, the tanto coming from the great swords of Japan used by samurai.
- **Length of blade.** For most general use, the 4-6" lengths are used more often. Generally, the longer the blade, the thicker the blade and heavier work it will be used for.
- **Thickness of blade.** For this, the heavier the work, the thicker the blade.
- **Handle.** The handle is important for several reasons. Again, it must be suited to the use. For my knife I have Micarta handles that are rough and when wet, do not allow you to lose grip. Wood handles look nice but take some time to match the handles to your use and needs.
- **Type of steel.** There are at least 40 types of steel to choose from. The 3 most basic are Carbon Steel, Stainless Steel and High Carbon Stainless Steel. Generally, Carbon steel will rust but has a great edge and sharpens quickly. Stainless is rust resistant but its edge qualities are different than Carbon. The hybrid is HC Stainless Steel. This married the best blade edge performance with little rust, it's not a bad way to go. I prefer Carbon Steel in 6", it just works for me.
- **Full Tang or Stick Tang.** In short, the full tang is the same piece of steel from tip of blade to butt. The Stick tang typically stops where the blade meets the handle. Personally I would not own a knife that is not full tang, it just creates so much strength to the knife. However, there are Stick tangs that have no conductive connection to the blade. So if the blade comes in contact with electrical voltage, the handle will not become energized. I prefer not to stick it where it does not belong....
- **Grind of cutting edge.** I think this is of less importance since the foregoing criteria will often dictate the way in which the knife is to be used, and will be made with the appropriate grind.
- **Blade Coatings.** On many knives, especially those of carbon steel, some knife manufacturers put a coating on it to prevent rusting. This works very well indeed but also has unintended consequences. If you intend to use the blade to start fires, the coating does prevent creating a spark. I always take off the coating and treat the blade myself.

With the knife selected, we need to look at sheath options. Since the sheath protects both the cutting edge from damage and you from damage from the edge, it's important. Leather has always been the standard until a few years ago when Kydex came on the market. Holsters for anything from lights to pistols were being made from it and it stands to reason, the knife market would love em. Leather does something that Kydex cannot; it bends, molds and fits to your body. Kydex is ridged and can be uncomfortable to wear. However, your cutting edge will never work its way through the sheath and become a danger. Another sheath you may find is nylon. Generally, they are reinforced with other materials, heavy woven nylon and Kydex that is stiff but does protect the knife from damage.

Making the choice on a knife can be tough since there are so many manufactures out there. If you do a google search for "Survival Knives", you will get mostly garbage. They appeal to the closet survivalist and you will see cheap knives that look menacing but have no game at all.

My 3 general rules are;

- If it costs less than 50 bucks run away. A good knife should cost you between 50 and 200 bucks. This tool is very important so here is where I would spend come \$\$\$\$
- If it has somebody's name on it, tread lightly and do more research
- Compass and fishing gear in the handle, no thanks

Some good choices for outdoor knives are Gerber, ESEE, Cold Steel, Ka-Bar Becker, Fallkniven to mention a few. You need to personally inspect and hold each one before buying, knives vary so much that you would be surprised. Do more research, read reviews from owners or bushcrafters that actually use the gear and appeal to the practical side of knives. There is so much hype and over the top nonsense that you must guard against entering that rabbit hole.

Some recommendations to start looking at are;

- Ka-Bar Becker 2. I own this knife and like it. Has a coated 5.5" drop point blade and hard sided handles. It's full tang and is heavy. The only drawback for me are that the handles are slippery when covered in blood. This knife will take a beating and not miss a cut.
- ESEE 6. This is my main outdoor knife. After searching around, this was my final choice. With a 6.5" blade, mine has the small area of serrated teeth on the blade. I have battoned this knife all day cutting up firewood and it just hangs right in there.
- Fallkniven A1. I do not own this knife but have good reports on it. Lighter than the Ka-Bar or ESEE, it handles well and is made from Stainless Steel, its worth a look.
- Gerber LMF II. Gerber makes some very good knives. This one was designed to be used in the field. With a 4.8" blade, drop point with bevel, it also works well as a spear since it's designed with that in mind. Good grips and finger guard, this is a nice choice.
- Cold Steel SRK. With a 6" blade and nice handles, it is a straightforward design with no nonsense. The 8A stainless blade will give great service.
- SOG Force 6". Another 8A stainless blade. Very nice grips and guard shows that his knife has a great design. Just the angle of handle to blade reduces fatigue.
- Moraknife. These are a great line of knives and my personal neck knife is the Mora Survivor Black. This knife is the perfect size for everyday use, with a high carbon 1095 steel blade that holds a great edge it can do almost anything needed.

Attached is some supplemental information on knife steels and handles.

Knife Steel Selection Chart

Steel Type	Characteristics	Approximate Rockwell Hardness
17-7 PH	Good corrosion resistance, excellent for water sports applications. This alloy is a chromium-nickel-aluminum precipitation hardening stainless steel with good edge retention. Great corrosion resistance generally means a high chromium content, and this means knives made with this steel will be a little harder to sharpen than blades with a lower chromium content.	54-56
154 CM	Originally designed for jet engine fan blades, it is the precursor to the Japanese made ATS-34. In recent years, this steel has made resurgence in the knife industry, offering good blade toughness, edge holding capability and corrosion resistance. Fairly easy to resharpen.	58-62
420	A hard, strong blade steel. This stainless steel is commonly used in knife blades, and offers good corrosion resistance at a low cost. Decent edge holding capabilities and fairly easy to resharpen, this steel is a good balance of the most desirable traits for knife steel.	49-53
420 HC	A high carbon version of 420 steel, this steel combines the excellent wear resistance of high carbon alloys with the corrosion resistance of chromium stainless steels. The high carbon content makes this steel harder to resharpen, but the tradeoff is better edge holding properties. BUCK-GERBER	58
440 A	A high carbon stainless steel used in many production knives. A good balance of edge retention, easy resharpening and corrosion resistance.	55-57
440 C	A high chromium stainless steel which exhibits an excellent balance of hardness and corrosion resistance. This steel takes a nice edge, and is fairly easy to sharpen even for a novice.	58-60
1095	This is a plain carbon steel, which means it has low resistance to corrosion, and low to medium edge retention. The benefit of this steel is it's easy to sharpen, will take an extremely sharp edge and is generally available at a low cost. ESEE (1095 CRO-VAN) – KBAR and BECKER	56-58
5150	A medium carbon, low alloy steel that hardens well. This steel is ideally suited to blades with a very thick cross-section such as tomahawks and axes. Extremely tough and impact resistant, this steel is most often used on blades which are hafted and/or thrown.	55-60
ATS-34	A very high carbon, chromium stainless steel with additional amounts of molybdenum. This steel has good edge holding properties and high corrosion resistance, but is more difficult to resharpen than lower chromium steels.	60-61
AUS 6A	A medium to high carbon stainless steel, this steel holds a good edge and is particularly well suited for heavy, long blades that are subjected to a lot of stress while chopping and hacking. It has good edge retention, and is fairly easy to resharpen with decent corrosion resistance.	55-57
AUS 8	A Japanese stainless steel, with superb toughness and good edge holding capabilities. This steel is fairly easy to sharpen and generally low cost with great corrosion resistance.	57-58

Steel Type	Characteristics	Approximate Rockwell Hardness
AUS 8A	A high carbon, low chromium stainless steel which has proven itself to be the ultimate compromise between toughness and strength, edge holding and resistance to corrosion.	57-59
BG-42	A high quality, bearing grade alloy with significantly increased amounts of carbon and molybdenum content plus vanadium for improved edge retention and strength. Easy to sharpen, with decent corrosion resistance.	61-62
Carbon V®	This low alloy, cutlery grade steel is superior to most other steels due to its chemistry. Decent corrosion resistance with superior edge retention makes this a premium steel for knife blades. This steel is exceptionally tough, and therefore harder to sharpen than most stainless steels.	59
CPM S30V®	This American made and engineered steel was created especially for the knife industry. It is a powder made steel with uniform structure and great corrosion resistance. Excellent edge retention and first rate toughness make this steel one of the best all-around knife steels, striking a balance between corrosion resistance, edge retention and sharpenability.	58-60
D2	This air hardened tool steel is sometimes called "semi-stainless" steel, because it contains 12% chromium. It offers decent corrosion resistance with exceptional edge retention. It is harder to sharpen than most, but can be finished to a high-polish shine.	59-60
Damascus	This steel is made from dissimilar steels folded or fused together with heat. It is often acid etched, which brings out the different steels in a striped pattern. Excellent toughness and edge holding capabilities make it a great blade, but the cost of production is high. Damascus is most often used in special applications like decorative blades.	Layers vary from 53-62
M2	This high-speed, tool grade steel is used primarily in cutting tools in industrial applications. This is metal used to cut metal. With excellent strength, enduring toughness and tremendous wear resistance, this is some of the toughest steel used to make knife blades. The tradeoff for all this toughness is that this steel is hard to sharpen, and it is highly susceptible to corrosion. All blades made from this steel will have a corrosion resistant coating applied, to give good corrosion resistance with such tough steel.	62
N690	An Austrian made stainless steel, it is comparable to 440C in performance. It offers good edge holding qualities with excellent corrosion resistance, and fairly easy sharpening.	58-60
S30V	This steel contains carbon along with high amounts of chromium, molybdenum and vanadium. This steel is double tempered for hardness and edge retention. It has excellent corrosion resistance, but is slightly more difficult to sharpen.	59.5-61
Sandvik 12C27	This stainless steel is made in Sweden. It is generally known as premium steel for knife blades, offering a good balance of corrosion resistance, sharpenability and edge retention.	57-59
San Mai III	San Mai means "three layers". It is a term used when talking about traditional Japanese swords and daggers. The laminated construction is important because it allows the blade maker to combine different grades of steel in a single blade.	Center layer= 59 Outer layers= 57

Steel Type	Characteristics	Approximate Rockwell Hardness
X-15 T.N	<p>A high carbon center layer provides the strength and edge holding qualities, while the outer layers are lower carbon steels, providing flexibility.</p> <p>Developed for the aircraft industry for jet ball bearings, and used in the medical industry for scalpels, this steel resists rust in the worst of conditions while maintaining ample edge retention. Offering an easy to maintain edge and excellent corrosion resistance, this steel is ideal in knives used for watersports.</p>	56-58

Handle Materials

Material	Characteristics
Carbon Fiber	This material is a woven composite of graphite fibers fused together with an epoxy resin. Providing ultra light weight and extreme tensile strength, it most often has a visible weave-like pattern. The weave pattern can be varied, as can the color of the epoxy used.
Delrin®	This lightweight and durable polymer was engineered for excellent long-term wear characteristics. It can be molded to form, and is used in many industries.
G-10	G-10 is an epoxy filled woven "E" glass composite, reinforced with glass fibers for strength. Originally designed for circuit boards, it offers the knife industry a handle which is impervious to most elements like oils, water and acids. It can be made in many colors, and finished in a variety of ways, offering different amounts of texture matched to different end uses.
Kraton®	This black thermoplastic elastomer offers superb flexibility and memory elasticity even under harsh conditions. Most often molded onto a harder sub-structure, Kraton® offers excellent grip and comfort.
Micarta	Technically described as "fabric reinforced phenolic laminate", micarta is created by pouring a resin into a flat pan, then laying down a strip of linen or paper fabric, which gets saturated with the resin. This process is repeated until the desired thickness is achieved. It can be made in lots of colors, is lightweight and and can be finished in many ways including polishing to a high luster.
Noryl® GTX	A modern, engineered plastic offering extreme durability. It is impervious to harsh environments and chemicals and is very strong. It offers no flexibility, but can be molded to any shape and in any color.
Phenolic	This hard, ebony-colored compound is almost impervious to heat cold and shock, making it practically indestructible.
Valox®	A reinforced resin with exceptional stiffness, Valox® offers strength and dimensional stability. It has outstanding chemical and flame resistance, and is molded to form.
Zytel®	Zytel® is a material made up of fiberglass and nylon. The two are combined and heated to near 600°F and then injection molded to the desired form. Strong and lightweight, it offers excellent surface grip.