

Knives of the Southwest Hat Creek T, Tucson, Arizona

This special collection of one-of-a-kind custom knives was designed for and made with Damascus steel. There is a unique story of discovery behind each knife – the style, materials, and process of craftsmanship by the artisan, Ted N. Larsen of Tucson, Arizona. The striking blade surface patterns were created in the process of forging, folding, deliberate twisting, cutting and hammering the two types of steel, 15N30 nickel and 1095 high carbon steel. These alloys are folded 1,032 times, stress relief annealed, and cryogenically treated to -330 degrees Fahrenheit resulting in Rockwell C 58 hardness. The polished surfaces have a resulting hardness and controlled tempering to sustain a sharpened edge, a combination of strength and durability that manifests a quality tone upon striking. All knife designs and material combinations are the unique innovation of the artisan.

A native of Flint, Michigan, Ted is fourth generation in a family of tool and die designers, black smiths, Danish shipbuilders, and talented skilled trade professionals who immigrated to the U. S. to join the beginnings of the automobile industry. Ted spent 25 years as an automotive design, manufacturing and service technology engineer in Detroit. He is quite comfortable in addressing mechanical, electrical and systems engineering challenges, and has applied this background subsequently in other industries. Ted has rebuilt 35 sports cars including several which have received national recognition. With a passion for ocean going sailing, he has also restored classic wooden sailboats. A resident of New England for many years, Ted restored antique furniture, turn of the century farm equipment, and designed and built an authentic post and beam barn to match his family's historic home in a Connecticut village. He recently completed a degree in architecture to compliment his earlier mechanical engineering studies.

Moving to the Southwest in 2004 and always the outdoorsman since his youth, Ted has chosen to leverage his industrial design and engineering background to shift into environmental design. He is fascinated by the history, people and products of the Southwest. Ted's expanding knife collection capitalizes on his lifetime accomplishments as an engineer, technician, metal and wood worker, and artist.



*Thank you for your interest
in my work. I would truly enjoy
collaborating with you to design
a unique knife, sheath and wooden
presentation box to commemorate
a life milestone, accomplishment,
anniversary or holiday.*

T. N. Larsen July, 2008

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Hat Creek T is a Division of The Larsen Group: Architects of Change

Knives of the Southwest
Hat Creek T, Tucson, Arizona

Inaugural Collection for Dark Star Leather
July 1, 2008

1. A Balanced Tanto	\$ 575.00
2. The Red Skinner	\$ 575.00
3. An Alaskan Ulu	\$ 675.00
4. The Cathedral Spearpoint	\$ 550.00
5. The Scandi Spearpoint	\$ 550.00
6. Form Follows Function	\$ 775.00
7. The White Tailed Deer	\$ 725.00
8. The Accented Huckleberry	\$ 575.00
9. The Bloody Trapper	\$ 600.00
10. The Mythical Oden	\$ 825.00
11. The Red Elk	\$ 825.00
12. The Wolf and the Snake	\$ 1,100.00
13. The Tiger Claw	\$ 850.00
14. The Barbed Wire	\$ 1,100.00
15. A Cowgirl's Fancy Friend	\$ 500.00
16. The Sunset Spearpoint	\$ 600.00

Knives of the Southwest

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1. ***A Balanced Tanto.*** Twist patterned Damascus steel blade with traditional Japanese style Tanto grind – challenging multiple sharp, and straight lined surfaces. Designed for a balanced hand hold. Handled in 50,000 year old wooly Mammoth tusk, unusual black tainting from Texas earth minerals. Brass pinned. Cowhide sheath lined with hydroscopic goatskin.

This knife was inspired by a Samurai sword featured in “The Japanese House: A Tradition for Contemporary Architecture” by Heinrich Engel, a magnificent book given to me by my close artist friend, David, who carried the book with him for more than 40 years, two thirds of his life. I wanted to see if I could make a similar blade with all its challenging angles. I partnered with a metal heat treater in Idaho who welded a rhomboid four-sided edge as the base. The design called for more steel than typical because I turned the angle of the twist to match the Tanto. I developed the relief drill innovation so the blade is easier to sharpen. The unique Mammoth tusk was unearthed in Texas, and I was quite surprised at how black it was initially. Working with this type of ivory is like filing on a billiard ball. The more I worked with it, the darker it got – black coming forward, going deeper. For six weeks I filed and melded the tusk completely by hand over the blade, creating a three-finger fit, one backing up the butt. The handle pattern follows the flow of the blade all the way to the point.

T. N. Larsen November, 2005



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2. ***The Red Skinner.*** Tight twist pattern Damascus steel, skinner fashioned blade with fluidic arc. 50,000 year old wooly Mammoth white interior tusk, with unusual red striations. Brass pinned. Cowhide sheath, form-fitted and lined in hydrosopic goatskin.

This knife has a tight twist piece of steel that I looked at for weeks to discover what might be possible. In the raw form before the hollow grind was cut out, it reminded me a pinstripe suit. I deliberately put the arc of the blade spine at 90 degrees to the pattern of the twist. The curve of the blade is an accentuation of a French curve tool that I use in my architecture work. I gave the blade a finer cut rather than a guard at the base. I eventually cut the relief notch for sharpening, allowing a reverse curve. One of the design studies I read talked about how when people hold a knife, they want to feel the steel not just the handle. You cannot help but put your index finger and thumb on the blade of this knife to hold it firmly. The whiter ivory is from the interior of a Mammoth tusk and is very hard. I purposely did not take the outer scale off, as the beautiful color is like honey and maple, with red-to-pink lines that flow through it. I was initially driven to use thinner handles, but the heftier size makes it fit better in a man's hand, and I also preserved the unique colors of the tusk. Because of the size of this knife and the position of the blade, the leather sheath was challenging and interesting to design, resulting not in a straight pull, but a continuous motion flowing with the arc of the blade.

T. N. Larsen October, 2005



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3. ***An Alaskan Ulu.*** Alaskan Inuit Ulu versatile kitchen knife, raindrop patterned Damascus steel blade. 50,000 year old wooly Mammoth tusk handles with fancy mosaic pins of brass, copper and nickel silver.

This is one of the most recent designs I have experimented with to create a kitchen tool. I had read how these implements are used in a rocking motion to cut spices, grains and vegetables. The native Alaskan Inuit used this form of knife to fillet salmon, as the length of the blade can be rotated easily to extend its affect. I had to work with an unusually large piece of Damascus steel (5 X 5 inches) at the onset. As the size of material grows, you can truly hear the ring in it if you flick a finger on the edge. The blade-to-neck-to-handle configuration is uniquely mine. This is the first time I used mosaic pins, a brass tube with six wire pieces in it, three copper and three nickel silver. The wooly Mammoth tusk handles are scale, which is the outer portion of the tusk and have had the most rapid advancement of minerals. The result is a woody look, deep lines of browns, tans, gold and some black. For safe and effective use, grasp the neck between your middle and ring finger.

T. N. Larsen March, 2008



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4. ***The Cathedral Spearpoint.*** Firestorm patterned Damascus steel, Spearpoint blade. Box Elder Burl wood from the Cathedral Forest in Stockbridge, Massachusetts. Brass pinned. Cowhide sheath lined with hydroscopic goatskin. First in a series of five Spearpoint knives.

This design study was modeled from a spear, one you would have two or three fingers on as opposed to a full handed grasp. Small and compact to have on your beltline, it is not conspicuous, but is still substantial. It has a very thin blade, only 0.152 inches thick. The handle material is a true treasure from the protected Cathedral Forest outside of Stockbridge, Massachusetts. In 1998 a horrific tornado ravaged the area, and only a few people were given licenses by the state to harvest the damaged wood. I fashioned the handle from an original 5 X 5 X 5 inch beautiful piece of bureled, box elder wood. The box elder is a fairly obscure, modest size tree, the wood traditionally used for small pieces of cabinetry. This medium is extremely dense, without a straight forward grain. In other words, the grain goes in every direction which makes it every bit as hard to work with as the Mammoth tusk ivory used in my other creations. I experimented for months before being satisfied with the pieces of wood I finally selected. Each of the knife's brass pins was intentionally centered to accentuate the surrounding compacted grain of the wood. This was the first knife which brought me to partner with our leather artisan, Don Spiel of J-D Ranch, Tucson, Arizona.

T. N. Larsen April 2007



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5. ***The Scandi Spearpoint.*** Firestorm patterned Damascus steel, Spearpoint blade. Scandi grind (optimal thickness blade) handled in Flemish Cap swordfish bill. Brass pinned. Tooled cowhide sheath lined with hydroscopic goatskin.

My Danish roots are reflected in this spearpoint design study. Historically the Scandinavian knives and weapons had a specific edge grind, a steep angle down to the cutting surface. As soon as I cut the first edge on the side, I knew it was right. I filed the second side to match. My heat treater immediately knew the genesis of the look. I had originally made the handle out of a faux white ivory material, but I became frustrated and abandoned the approach for several months. After moving on to another blade, I found an interesting 5/8 inch thick slab of swordfish bill in Massachusetts. I cut it in half and liked the iridescent look and feel to it. I used swordfish bill because I knew no one would ever guess what it is. Tilt the handle in the right light and you will see a hidden line that comes forward the more you look at the knife. This is the first knife with which my sheath designer took full design liberty. He whimsically chose the texturing on the sheath upon learning that baby swordfish have scales, whereas adults do not.

T. N. Larsen May, 2005



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6. ***Form Follows Function.*** Electric patterned Damascus steel blade. Form fitted, right handed knife, handled in unusual Alberta Elk Antler following the direction of the antler beam. The handle drove the knife design instead of the blade. Guards fashioned from black North American Buffalo Horn. Brass pinned. Combination cowhide and stingray sheath, with distinct pearlescent blaze. First of three.

This knife took a full year to design and craft. I had the Alberta elk antler beam early on, but I had to experiment in multiple cycles to find the right blade style to match it. I split the beam and removed ½ inch from the width, resulting in a natural, perfect curve to fit the palm of my hand. The more I handled it, the more I knew something would come out of it – a very long French curve that would go into a straight spine. I selected a piece of steel with a pattern that mimics the electrical interference on an oscilloscope, a piece of equipment that I have used since my early engineering days. The blade has a deep belly in it and as a result, I had to provide more guard than typically necessary. This led me to adding the buffalo horn fashioned as a thumb-and-forefinger guard to prevent the user's hand from slipping. The handle is truly free formed. The edge of the steel was ground to match the form of the antler, and the grind goes all the way to the knife's spine. My leather artisan and I decided to experiment with a sheath material other than leather, and the stingray hide with its characteristic eye wraps naturally around this knife's blade.

T. N. Larsen February, 2006



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7. ***The White Tailed Deer.*** Raindrop patterned Damascus steel blade. Montana White Tailed Deer Antler handle with Alaskan Walrus Tusk end cap. Brass finger guard. Tooled cowhide sheath.

This is not a full tang knife, anchored instead by a piece of steel that was deep drilled back into the handle. I had the blade made first, and for over a year it sat on display in my studio in white (not heat treated), as if waiting for the right handle material and design configuration to arrive. The blade has a three dimensional shimmery wave to it, and thus needed something extra special in the handle. I ultimately selected the pronghorn crown of a Montana white tailed deer. The original butt of the knife handle had attached directly to the deer's skull. I decided to complete the look by adding a piece of walrus tusk, certified prior to the 1982 ban, as an end cap. I was not happy with how the blade fit the handle and sought advice from a colleague in North Carolina on brass guards, and how to transition from a flat blade to a drilled hole. The antler has not been worked, just sealed, allowing for the deep chocolate brown color to be maintained. When stored inside its sheath, what you see on the outside draws you curiously to reveal the blade.

T. N. Larsen December, 2007



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8. ***The Accented Huckleberry.*** Stainless Steel (440) blade handled in Washington State Huckleberry Root, with ebony, maple and 50,000 year old wooly Mammoth tusk accents. Cowhide sheath with patterned Alberta Porcupine Quills, hydroscopic goatskin lined.

This knife was an experiment to create a full size weightless knife, following my having worked so long with heavy Mammoth tusk-handled knives. Given my wooden boat building and furniture crafting experience, I researched how tree root once dried becomes very dense and light weight. I found this very intriguing. I purchased a piece of kiln-dried huckleberry tree root and drilled a hole down the center to affix the blade, which had a screw welded to the end of it. The wood is a particularly beautiful, sun spot burl. It is some of the hardest wood I have ever worked with, and would not accept any sealer, oil, or lacquer. Its luster comes from countless hours of rubbing by hand with a simple piece of cotton mesh cloth. The blade design is the form of a classic Gerber model from the late 1980's with the user's index finger and thumb are on the steel at all times. The guard is fashioned out of ebony, stacked next with a thin line of maple, one of red vermillion, and then a final piece of ebony. The end cap is wooly Mammoth tusk, and I admit I just could not get away from using one of my signature materials. The porcupine quills embedded in the sheath were a gift from an elk beam provider, who sought to make amends when a shipment from Canada was held up in customs for weeks. He sent me 400 prized quills, a supply sure to last my lifetime. I am very pleased with this knife. It offered me a unique opportunity to marry my machining background with woodworking and aesthetic design expertise.

T. N. Larsen September, 2007



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9. *The Bloody Trapper*. Trapper style knife, two blade folder circa 1940's of river patterned Damascus steel. Handled in 50,000 year old wooly Mammoth tusk with bloody Jasper gemstone insert. Brass bolsters and liners with mosaic pins of brass, copper and nickel silver.

I wanted to make a folder, yet I knew it would be considerably more challenging than any of my other blades. Thus began a year long journey of learning. One day I found a classic trapper style knife run over at an intersection in Tucson. I took it apart to figure out how it worked, and drew blade patterns off of the damaged knife. One blade is meant to carve out the bowl of a pipe, and the second is to whittle with. The knife's complexity comes in how the springs are loaded through the bolster. You have to pin it first, then do the fitting so that the blades precisely snap into place. I selected Armco bronze to make the bolsters, and a river pattern Damascus for a unique look attributed primarily to the thinness of the blade. The pieces of mammoth tusk for the handle were left over from another knife, almost too thin, yet not large enough to make an entire side scale. The piece of bloody Jasper gem was purchased in 2007 from Mineral Man 99 at the heralded Annual Tucson Gem and Mineral Show. The six separate pieces of the knife handle required two sets of fasteners which led me to use finely detailed mosaic pins, a brass outer tube with copper and nickel silver wires inside. I disassembled, refined the components, adjusted the interfaces, and reassembled this knife countless times to get a precision fit, and for it to look right whether opened or closed.

T. N. Larsen January, 2008



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10. ***The Mythical Oden.*** Mythical Oden's Eye patterned Damascus steel blade with decorative, true file worked spine. Handled in North American Buffalo Horn with mirrored brass guards, lanyard tube and double pins.

This is the first piece of steel I have worked with that had an asymmetrical pattern. I was not convinced that I liked it at first. I cut the bevel, but could not determine what the pattern would become prior to heat treat. This blade was displayed in my studio for over a year before I pressed forward with the bolster and handle design. I began working with buffalo horn for the handles, and decided to cut half of the finger grip off to add the brass piece, resulting in a balanced appearance. I added three more holes, using one as a lanyard tube. This knife is one of the first knives that I created where the blade thickness is tapered from the heel to the point – thin to thick to thin again. This is an interesting look when viewing the special spine with the taper, taken from a design feature seen once in a knife collectors' magazine. I polished the spine and did the file work by hand to allow extra light to the otherwise dark, heavy blade pattern of eyes.

T. N. Larsen July, 2006



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11. ***The Red Elk***. Sunset patterned Damascus steel knife, full sized. Handled in Alberta Elk with decorative red fiber liner. Combined brass bolster and finger guard, brass pins.

This knife blade came from an intriguing, small piece of sunset patterned Damascus that I bought that was not large enough for a major work. Welding a piece onto the back, I cut it into a triangle and sent it off to be heat treated and was pleasantly surprised when it was returned. I used a very deep, furrowed piece of Alberta elk antler, cut in half for the pieces of the handle. After first taping them together, I decided to insert a bold feature created by compressing red cloth fiber left over from a Connecticut architecture project. I selected bright brass to compliment the length of the bolsters. Surprisingly, the red fiber liners when sanded evolved into very smooth, glassy surfaces. I pinned and filed the pieces to match to the extension of my index finger. When holding this knife, you know where it is in your hand all the times.

T. N. Larsen September, 2007



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12. ***The Wolf and the Snake.*** “Cowboy Lockback Folder” with Mythical Oden’s Eye patterned Damascus steel blade. Complicated, precision fit stainless steel bolsters, liners and backspring. Twelve interlocking, custom-matched pieces. Decorative true file snake tracks spine work. Alberta Elk Antler with unique serrations due to wolf gnawing. First in a series of five. A substantial 9 ounce knife to last a lifetime.

I had purchased a very long piece of steel from which to make several blades. I was determined to design a robust, rugged half pound knife similar to those I had read about in *Cowboys & Indians* magazine – a “cowboy folder” with a substantial blade and fit to a man’s hand. The first configuration I worked with did not have a lockback design, and I decided to add this feature for safety. Plus, it brings with it another design feature – a distinctive snap to indicate when the knife is fully open, and when it is fully closed. I decided the bolsters needed to be stainless steel compared to decorative, bullet proof yet bright in color. The supplier for this collection of Alberta Elk antler apologized, as several pieces had been gnawed on by wolves before they were harvested. I think the striations give the antler an authentic character, with amber and creamy white deep furrows. Once I had put the knife together, I realized the lockback was too bright and shiny, and needed to break it up with random file work to control the light, revealing a design that looks like a snake track. This knife is substantial and impressive in look and feel. I am particularly proud of this creation, and that I was able to take it apart and put it together multiple times, without any fasteners visible to the naked eye. This single knife reflects the culmination of my three year journey to master design and execution of complex folder knives.

T. N. Larsen August, 2007



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13. ***The Tiger Claw***. “Cowboy Lockback Folder” with sunset patterned Damascus steel blade. Complicated, precision fit stainless steel bolsters, liners and backspring. Eleven interlocking, custom-matched pieces. Second in a series of five. Deep furrowed Alberta Elk Antler handles.

Our 10 year old daughter named this knife. This folder design study was targeted to get the functional blade of the other larger, more formidable cowboy folders into a much smaller package. I had two pieces of stainless steel left over from another knife. The arc of the blade perfectly matches the lockback innovation, provided both for safety and a deliberate click to verify full opening and full closing of the knife. I purposely worked to have the various metals stand out, as compared to the handle material. The lock mechanism operates with a uniquely designed spring location opposite to conventional knives, required to maintain the compact packaging.

T. N. Larsen November, 2007



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14. ***The Barbed Wire.*** “Cowboy Lockback Folder” with Mythical Oden’s Eye patterned Damascus steel blade. Complicated, precision fit stainless steel bolsters, liners and backspring. Twelve interlocking, custom-matched pieces. Decorative true file barbed wire work on the spine. Alberta Elk Antler handles, pieces from the same beam yet starkly unique. Third in a series of five. A substantial 9 ounce knife to last a lifetime.

This cowboy folder has elk antler from the same beam, yet is surprisingly asymmetrical, one spotted side and the other striped. The coloring goes from brown to cream to deep bluish grey. Because of this asymmetry, I decided to make the back spine totally symmetrical and the pattern resembles the appearance of barbed wire. Like others made prior, this knife is substantial and includes the lockback safety feature, plus a distinct sound to verify the fully open and fully closed locations. The pattern in the steel is tremendous, with larger than typical eyelets lending to the complex appearance for the blades.

T. N. Larsen February, 2008



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15. ***A Cowgirl's Fancy Friend.*** Stainless steel (440) boot dagger with 3 ½ inch long blade. 50,000 year old very white Mammoth tusk handles with black striations. Nickel silver pins and lanyard cutout. Stylized, tooled black leather sheath with back-mounted clip.

In December, 2007, Jane saw my knives and had something very specific in mind that she wanted me to create just for her. Something she hadn't seen in anything I had made to date. The knife needed to fit in her cowboy boot, have a small handle to fit in her hand, and be easily accessible while riding her horse bareback daily in the east Tucson desert. Jane didn't necessarily want it to have a guard, but she wanted it to be a substantial weapon. The more I talked to her the dichotomy of this sweet, small-framed, 80 year old woman requesting a deadly weapon made me wince. That is until I realized it was to replace the Model 19 S&W revolver that chafed her back when she rode, a gun most men would be hesitant to handle. I continued to try and soften the concept of the knife, not wanting to accept what she truly wanted. I added the heart cutout for this very reason, drilling two holes to carefully overlap. I made this second knife at the same time, and used very, very white Mammoth tusk with black striations for the handles. The silver pins match the highly polished blade. Jane's knife had black buffalo horn handles, brass pins, and her initials engraved on the handle. When I handed it to her upon completion, her eyes just lit up and there was nothing that was going to get her to part with that knife – hers for keeps. Safe travels, Jane.

T. N. Larsen January, 2008

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16. ***The Sunset Spearpoint.*** Firestorm patterned Damascus steel, 1095 and 15N30 folded 1,032 times. Spearpoint, Scandinavian grind blade. Handled in 50,000 year old wooly mammoth interior tusk with amber luster. Blind brass pins. Tooled and laced cowhide sheath lined with hydroscopic goatskin.

My Danish roots are reflected again in this spearpoint blade design study, a metalworking configuration I first developed in 2005. Historically the Scandinavian knives and weapons had a specific edge grind, a steep angle down to the cutting surface, with thickness the full center length of the blade for optimum strength. This knife is for general purpose utility, to be worn on the belt, with the brass pins blind when sheathed. The handles originated from the interior of a wooly mammoth ivory tusk, and when worked the luster of a serene, amber sunset emerged.

T. N. Larsen August, 2007