



Making a specialist leather knife sheath

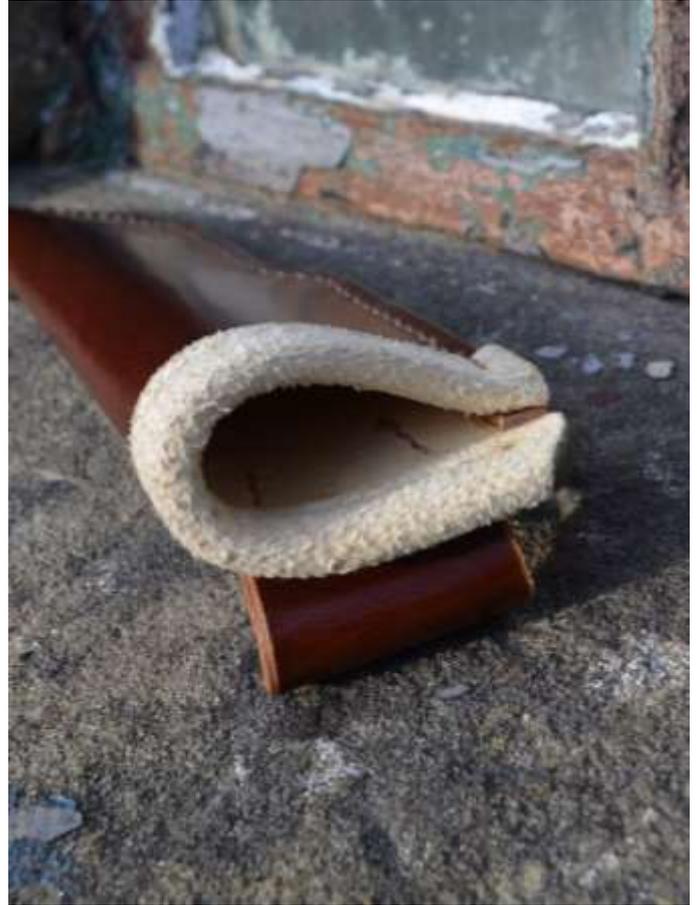
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Spring 2019

All great things start with collaboration and putting the right people and materials together. This tutorial is an example of collaboration at its best, with expert leather knowledge from **Dr Peter Laight** (The Identity Store), leather work by skilled Bushcraft leather and knife maker **Simon Hardie** (Ashdown Forest Crafts), and professional edge treatment from **Mark Cambridge** (The Hairy Leathercrafter).







The Leather Story – Dr Peter Laight

Peter has over fifty years of experience making performance leather throughout the world. His most significant contribution was creating and making a water resistant and stay soft sports and outdoor leather that has dominated the global market over the last forty years, with sales of over fifty million square feet.

Leather equipment has helped transport and protect metal blades for thousands of years. The traditional leathers that have evolved over this period still enable makers to create handsome, functional sheaths and long may this continue.

The choice of leathers in this project was inspired by this tradition, but with the thought of introducing variations to improve aesthetics and functionality. These possibilities are presented as an inspiration for the gradual improvement in traditional leather and sheath construction.

The principle in this project is to view the sheath as a leather system designed to both protect the knife and to help develop a sheath micro climate that is conducive to prolonging blade life and improving appearance.

An oil tanned liner has been spot-glued to a historic bridle out case leather. The liner was developed by Peter to absorb and transmit (wick) water and water vapour away from the blade, while staying soft after drying.

The bridle leather was made sixty-five years ago by Sedgewick & Co of Walsall, curriers that were the best then as they are today. The resilience of this pit-tanned vegetable leather is combined with a deep aniline surface patina giving a beautiful depth to the colour.

After sheath construction, visible surfaces of both leathers have been treated with a unique nano technology surface coating giving exceptional water and dirt resistance.

Note: to purchase the special vintage bridle leather call 01629 581403 (supplies are limited)



Sedgewick & Co, circa 1950's



Oil tanned 'stay soft' lining and Sedgewick's vintage bridle leather

The Maker's Story – Simon Hardie



Simon is an experienced knife maker, leather-worker and Bushcraft instructor. He used knives outdoors for many years before making his own and believes every knife has a purpose and is to be used. Simon extends this philosophy to his leatherwork.

This step by step guide shows how Simon made the leather sheath.

Step 1 - Cut out the leather



First, I decided which sheath template was the best fit for the knife - one of my Foresters. Then I marked around the template and any other separate parts, such as the belt loop, and welt, and cut them out.

- Mark out the template on to the leather
- Cut out the leather

Step 2 - Marking out the Stitch holes



I marked where the stitch line was going to go, and then set about marking out the stitch holes. I used stitching chisels here, marking the holes initially, before tapping all the way through. I started from the first defined corner in the stitch line and worked upwards toward the top of the neck. This made sure that there was a stitch hole where the line changed direction.

- Using a groover or wing dividers mark a line parallel to the edge for the stitch holes down one side (half) only. Note using a groover tool make a channel for the stitches to sit in and protect the thread from abrasion.
- Use an awl or stitching chisels (as pictured) to make your stitch holes.

Tip: I waxed the chisels with beeswax to make it easier to remove them from the leather

Step 3 - Mark out and Glue the top lining piece



As it is a lined sheath, I prepared a length of the buckskin to make a rolled seamed edge to stitch in place around the entry point, or neck of the sheath. I did this by folding and gluing one edge down, and then clamping with an even amount of pressure across the piece, before leaving the glue to cure.

- Mark and cut out a piece of the lining leather for the top of the sheath (easiest to do with scissors)
- Glue one third over on itself – this will create a nice even edge on the front of the sheath
- Glue in place using a strong contact adhesive (press and leave to bond) on the front top side of the leather (slightly rough the surface with a fine sandpaper)
- Fold over and repeat for the back

Step 4 – Stitch down the top lining piece



The next step was to glue in place the seam over the edge, and again clamp with an even amount of pressure whilst the glue set. Once it had set, I marked out a stitch line the length of the seam, clamped it up in the stitching pony, and saddle stitched the whole seam in place.

Step 5 – Adding the belt loop



I made the belt loop next and before attaching it, I burnished the edges with beeswax, as I wouldn't be able to access the edges once the loop is attached to the sheath.

I marked out the stitching holes on the belt loop, with some inside the loop near the top for extra integrity, and some at bottom of the loop, in order to be able to sew through all the layers. I glued it in place and, as before, saddle stitched it at both the top and bottom.

- Mark out and punch the stitch holes using an awl or stitching chisel
- Rub the edge down to smooth using water, Gum Tragacanth or Identity Edge Foundation (see Edge Finishing)
- Position and sew the back of the belt loop in place
- Fold over the loop and sew through to fasten.

Step 6 - Adding the welt and Saddle Stitching



- Glue the welt into place.
- Lastly, I folded the sheath over and glued it together.
- Once dry, I pushed an awl through each hole to open them up on the back ready for sewing up. Some people like to awl each hole through a few at a time when it's clamped in the stitching pony, but I prefer to do the lot beforehand with it flat on the table, to ensure that the holes are at a perfect diagonal and also so that I don't interrupt the flow of stitching once I've begun.
- Then, into the stitching pony it goes for the final sewing.
- Finally, I levelled the welted edge out. I usually do this either on a linisher or by hand with wet and dry sandpaper, then it's ready for Leading Edge Finish.

After that, there's a small amount of fettling so the knife fits snugly, and it's done.

Edging Leather – Mark Cambridge



Mark is an experienced leather worker who makes an assortment of leather goods, applying his engineering background to get a high quality finish and attention to detail. He has been working with The Identity Store over the last two years using the Identity Store range of Leading Edge paints, to create a technique for finishing the raw edges for leather to a very high standard. This works well especially when covering multi layers of leather, for example on a knife sheath or wallet.

For this project the appearance and technology developed in edging leather are offered as a useful alternative to traditional burnishing.

Step 1 - Sanding



- An important step in multi-layer edging is the initial sanding process.
- I used a combination of a sanding drum with 60 grit paper and a final sand with 400 grit wet and dry sandpaper to ensure the surface was smooth enough.

Step 2 - Burnishing



- Apply some Gum Tragacanth to the edge with a clean finger or small dauber.
- Use a standard wooden slicker burnish the edges and bring up a slight shine. Top-Tip – when you hear a clicking noise as you slick, you know that the edge has been heated enough by the burnishing, continue for a few more strokes and then stop.

- Give it another light sand using 400 grit wet & dry sandpaper.
- Burnish again using the same technique (Gum Tragacanth and wooden slicker.)
- Note – do not use any additive to the edge other than moisture or Gum Tragacanth (no beeswax etc) as this will affect the adherence of the finishes.

Step 3 – Apply Leading Edge Foundation



- Using a Craftool Pro Edge Roller, apply Edge Foundation to the entire edge.
- Leave to air dry for roughly 20 minutes (you'll see it change from wet, to a satin finish).
- I use small tattoo ink pots in a little homemade holder to save the mess of dipping the Edge Roller in the bottle. You'll be surprised how little is used, and the bottles will last a very long time. Once finished, the ink pots can be rinsed out and reused, or discarded.

Step 4 – Leading Edge Colour Coat



- Apply Leading Edge using the same technique as the foundation. Don't overwork it but ensure good coverage and a slight 'doming' is perfect. Don't worry about air bubbles/particles at this stage.
- Leave to air dry for 20mins, or until a satin finish is visible.

- An alternative to air drying would be to place it in a pre-heated oven set to 50 degrees centigrade for 5 minutes.

Step 5 - Sanding



- Using 400 grit wet and dry sandpaper, the edge was lightly sanded to reveal any imperfections. This step is especially important when dealing with multi-layer construction as it will highlight any low spots, and blemishes.
- Be careful not to rub too hard as Leading Edge is flexible and slightly rubbery when dry – any excess heat generated will soften and tear it away.
- Slow and steady is the key to this sanding step.
- Once you have it generally smooth and flat, you can address any low spots or sinkage by re-applying Leading Edge to that area and repeating the drying and sanding process.

Step 6 – Second Coat of Leading Edge



- Once you have a completely smooth edge, its time to apply a second and final coat of Leading Edge. This is done in the same familiar manner as the foundation and the first coat of colour. Applying slightly less is preferable here – no ‘doming’ is necessary. This will ensure a more consistent finish during the curing process. As before, ensure the item is kept in an upright position to prevent the finish from running and ‘pooling’.

Step 7 – Gloss Finish



- You can use various finishes to produce your desired shine. My preference is Fiebing's Neutral Edge Kote (pictured in a different bottle to aid pouring into the ink pots).
- You can apply the finish in a variety of ways, but I personally like to use a cue tip.
- Ensure you apply enough so that it looks white upon initial application. This will ensure a good coverage as the Leading Edge will absorb a very small amount.
- Air dry until you see a totally clear shine.
- An optional step is to add a second coat if desired. It is not necessary for any protective purpose.

Finished!



To make this yourself:

You can find a list of the items used in this article by going to www.identityleather.com and clicking on the Information Page.

You will need:

Oil tanned stay soft lining leather (available from The Identity Store)

Veg tan leather around 2.5mm

Note: to purchase the special vintage bridle leather used here call 01629 581403 (supplies are limited)

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| Materials/Tools Knife to cut the leather Contact adhesive or leather weld Stitching Groover Stitch awl Stitching Chisel Harness needle size 2 Waxed Thread Beeswax DucksWax (Can be used for water-proofing leather goods) | Edging Wood Edge Slicker Gum Tragacanth Edge Foundation Leading Edge Paint Fiebings Edge Kote Clear (Neutral) Edge Roller Pen Available from www.identityleathercraft.com |
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Further Information

Dr Peter Laight – www.identityleathercraft.com

To see more of Simon's work go [to Ashdown Forest Crafts](#)

To see more of Mark's work go www.thehairyleathercrafter.com