

Beginning Leatherworking

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Leather, the hide of various animals, has been used since ancient times for many practical and decorative items. In today's world, we still find many uses for leather from the mundane to things like armor and scroll covers. The following is a short overview for those of you who would like to work in leather within the context of the SCA.

Where Do I Start?

I remember when I was at this point and had no idea what I needed to purchase or how to handle tools or use dyes and finishes. The best advice I can give you is to find someone who does work in leather and ask tons of questions. Most of us are more than willing to help out and to answer your questions in addition to giving you much more information than you will need at first. If you cannot find a leatherworker as a resource person, your next best option is to purchase beginners videos from a company such as Tandy Leather. Many of these videos have a lot of great information that will get you on your way to working leather in no time. Tandy also carries many good books that will help you to progress in whatever facet of leatherwork you choose to pursue. Finally, there are many websites on-line devoted to leatherworking within the SCA context. These will provide more detailed information for actually making items like armor or period style shoes.

What Kind of Leatherwork Am I Doing?

As stated above, there are many different items you can make with leather that are "period". Each will be made in a different manner with different materials. To determine how to go about making a particular item you will have to evaluate a number of different things.

First, you will have to determine what type and weight of leather you will use. You can purchase everything from fine garment leather to very heavy armor grade leather. Obviously, one will be good for covering a book or making a cloak while the other will be great for making a suit of full armor. So educate yourself on various grades of leather. Again, I will refer you to Tandy leather. Their catalog has a guide in it that will give you a general idea of the thickness of each type of leather they sell and the leather description will give you ideas for the use of that particular leather. A catalog can be ordered at <http://www.tandy-leather.com/> or by finding your nearest retailer or calling the company directly.

After you determine what type of leather you need, then you will have to figure out if you are going to do tooling, sewing hardening or any other of a myriad of treatments to achieve your final product. Some of the next few sections will give an overview of the different methods of working leather. These sections are by no means an exhaustive survey of all the ways you can work leather.

Tooling

Tooling is a method whereby you add decorative work to a leather item. It is typically done by two methods: embossing and cutting.

The first, and easiest, is embossing. There are many, many dies made for leather embossing. You can find designs ranging from oak leaves to letters of the alphabet to a basket weave pattern. Each of these tools is used to emboss the leather with the given pattern by first dampening the leather and then applying the tool and hammering the pattern into the leather.

The upside to embossing is that it can be quick and easy. The downside is that you need to purchase the embossing tools for each pattern, which can become quite expensive, and that you are limited in your design work to the patterns available and their combinations. Now once you start to combine patterns, you can get quite a lot of nice effects. But for really nice, creative work you need to start learning to cut and bevel your leather.

To make unique designs that are very realistic and detailed one would use a combination of cutting and embossing. There is a special knife that is made for cutting leather that is beveled and that swivels to give you maximum design ability. I highly recommend buying a ceramic blade right from the start to avoid the need to sharpen blades. The ceramic blade never needs sharpening and, if you care for it properly, can last you a lifetime.

Swivel blades come in various designs, widths and bevels. Each one is used to achieve different effects. To start with, a basic swivel blade will be plenty for years of use. It is only when you start to really expand your design work that you would need to consider buying different, special purpose blades.

The basic method for doing design work on leather with a swivel blade is to dampen the leather and then scribe the design onto the leather with a special tool made for this purpose. You must use a Mylar pattern between the leather and the scribe in order to do this. Once you have your pattern drawn on the leather, you use your bevel knife to cut partially into the leather. You never cut too deeply or all the way through your leather. At this point, it will take a lot of practice to get good lines and curves. Be patient and keep practicing.

Once you get your cuts made, you use a beveling tool to “tuck” the edges of your leather under and to cause your design to pop out. You can also use different pattern embossing tools at this point to get shading and background effects. Really, your options are limitless and you can do some very fine work with a few tools and little practice and patience.

If you want to do tooling, I would highly recommend a beginners kit that you can purchase through Tandy Leather (And no, I don't work for them! They just have the most extensive supply of items that you'll find as you start.) A beginners kit will cost around

\$75.00 to \$125.00 and will include a book, tools, a knife a video, finishes and will be well worth your investment. It's very satisfying to be able to have everything at hand be able to produce something fairly quickly and well.

So What About Armor?

If, on the other hand, you really don't care much about decorative work and just want armor to get yourself out on the field, you will take a totally different approach to all of this.

First, you will need to purchase at least a half hide of a very heavy leather such as a 10 to 15 oz. Each ounce equals 1/64th of an inch. I would consider 10 oz. to be the minimum and 15 oz. to be the maximum. If you are only making half gauntlets or arms, you can purchase smaller quantities of leather or get a few friends to throw in on the purchase of a half hide. Leather of this weight is not particularly cheap.

You will want to purchase untreated leather. It will still bleed some color, so be aware of this when fitting armor on your body or over a garment. It does stain and will continue to even after you have fought in it for a while.

As for patterns, you can use many of the same patterns for armor parts that you would work in metal. The leather will just have to be hardened wax if you are making items such as arms or half gauntlets. For body armor, water hardening with interior plastic plates made from buckets and foam padding is plenty.

To make water hardened armor your best bet is to find someone who has already made armor of this variety. This short treatise on leatherworking is not the place to try to tell you how to make this sort of armor. The process is relatively long and complex. Fitting the armor takes experience and patience. I will say that once it is finished it is light and very flexible. It also breathes. You will likely get anywhere from 3-5 years use out of a full set of leather armor depending on how much you fight.

Wax Hardening

If you are simply making armor bits that need to hold up similar to Kydex or metal, you will want to wax harden you leather. There are many opinions and different methods on how to do this. The best method I have found uses paraffin and carnuba wax in a 3 to 1 ratio.

First cut out and shape your leather pieces by soaking them until the leather stops bubbling or fizzing. Use as hot of water you can. No need for boiling water though. Once the leather is wet, shape it and let it dry. At this point, use a Dremel or a drill to make any holes that will be needed for ties or strapping.

Once your pieces are dry you will harden them. Start with one piece until you are comfortable with the process. Trying to juggle too many pieces at a time is what tends to cause accidents.

Cover all your work surfaces with newspaper. Wax is very hard to clean off once it gets on your counters or stove.

Take your piece of armor and set it on a cookie sheet that has been covered well with aluminum foil. Pre-heat your oven to 250 degrees and begin to melt your paraffin in an old pot that will be kept for this use. A double boiler is safer, but I use a regular, heavy pan and watch it very, very closely. Paraffin can catch fire easily if it becomes too hot. If you see any smoke, it's too hot and you need to remove it from the heat at once. Please be careful with this process!

Once the paraffin is mostly melted, add your carnuba wax flakes and allow them to melt. Now you will have a homogeneous mix of both waxes that you'll apply to your leather with a paint brush.

As your wax is melting, heat your armor bit in the stove long enough to get it good and warm. DO NOT burn it!! You will probably want to have gloves on when you handle the armor as it's coming out of the oven.

Take your melted wax and "paint" your armor bit both inside and out until it will not absorb anymore wax. Now pop it back into the oven and watch it very closely. As soon as all of the excess wax has melted into the leather, remove it from the oven and let it cool briefly. Now apply another layer of wax and put it back into the oven. Remove it when all of the wax has absorbed. I tend to repeat this process three times total for a really hard piece of armor.

When the armor bit comes out, it will be very flexible. You will want to do any final shaping and fitting with other, articulating pieces at this time. When the armor is relatively cool, take a soft cloth or paper towels and burnish any excess wax off the piece. You can also pop it back into the oven if necessary to help the process of removing excess wax.

Once the armor is dry, you will be able to pretty much pound nails with it. I have made articulated arms in this manner that have held up for years. Since the carnuba wax and paraffin have a higher melting point, these pieces of armor will not get soft in the summer like beeswax hardened armor would.

What Else is There?

In the preceding pages, I covered two of the most popular uses for leather within the SCA. But there are many other things you can do with leather. Decorated scroll covers, period style book covers, shoes and boots, shield covers and the list goes on.

Leather is a very versatile medium to work in. That is part of the reason that it was used in prehistoric times for so many items. The other reason is that it was readily available. During the middle ages, pigs and cows both supplied leather in addition to various other sources. Today, you can find everything from the common cowhide to exotic leathers.

There are also many resources that can help you get started in leatherworking. The first thing you have to do is simply start. Then, be creative and allow yourself to experiment. Some of the best work I have done and that I have enjoyed the most was a result of experimenting and simply doing things that had not been tried in the past. Most of all, have fun!