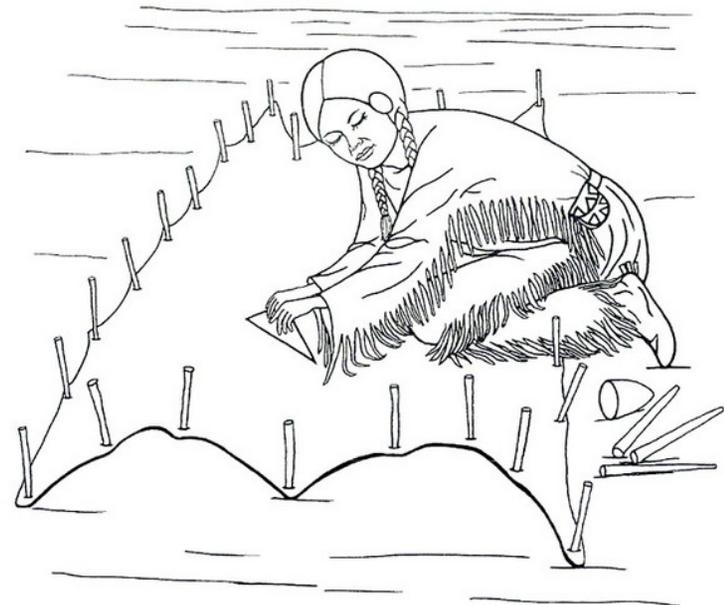


SKINNING, TANNING, & WORKING HIDES

a DIY guide to an ancient skill



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Skinning animals and tanning and using their hides is a skill as old as humanity. As furless apes, those humans who live in colder climes are at a severe disadvantage to survive. In order to adapt to cold weather, it was crucial that our species learn to preserve and work hides, and craft them into functional clothing, shelter building materials and shelters, bedrolls, backpacks, and a multitude of other gear.

The knowledge of skinning and tanning hides has severely diminished in the modern world of synthetic fibers and industrially-produced everything, almost to the point of extinction. Occasionally, one is lucky enough to find a cantankerous old timer who still has the knowledge, or an indigenous person of the old school who is fighting against white imperialism by preserving his or her culture, but these folks are rare. There are also a number of books on the subject, but the majority of texts that claim to be authorities on skinning and tanning recommend the use of industrial chemicals and other nasty shit. A fraction of these texts mention primitive ways of tanning and working hides, but most are entirely ignorant that there's any way to practice these skills without the world of industry.

This zine seeks to correct this problem. I've been skinning non-human animals and tanning their hides for about two years now, and though I'm certainly not a masterful old timer, I'm more than competent in the art. I aim to empower the reader to skin dead animals with confidence, prepare tanning solution from materials found in wild nature, tan the hides of skinned animals, and work hides until they are soft, supple, and beautiful.

Before continuing on to the practical section, I'd like to visit a few points. First, I must mention that there are a thousand different ways to skin and tan animal hides. Everyone I've met who practices this skill, whether self-taught or educated by a teacher, has a unique method for working hides. This definitely seems intimidating to the beginner- I know it was for me- but such diversity of skill should be

fire and doesn't emit much smoke. Some people suggest smoking hides for 7-8 hours. I usually smoke hides for 45 minutes to an hour in several sessions. It's really up to your discretion how much time you want to devote to smoking hides, but generally, the more time you spend smoking, the more preserved the hide will be.

Once your hide is smoked, you will probably want to hand or foot soften it again. I almost always do, as there's really no such thing as a hide that's too soft.

When you've smoked a hide, it's finished. Finished hides can be used for a huge number of applications, far too many to explore in this zine. Good luck and happy tanning!



encouraged and embraced, not frowned upon. If you build upon the methods outlined in this zine and create a set of skills that works for you, I wholeheartedly support you.

I want to lay this point out flat just for emphasis: **THERE IS NOT ONE CORRECT WAY TO WORK HIDES, THERE ARE MANY!**

It might seem overkill to mention this again and again, but my progress in learning to work hides was intensely hindered by self-doubt and fear that I was fucking everything up. And certain persons were very discouraging of my ideas and methods because I did things a little differently than they did. This is ridiculous. Don't be afraid to experiment with new methods, and don't be afraid to make mistakes.

Another point I have to mention is that skinning and tanning hides is not a gendered skill. Sadly, many books about this subject, and many teachers in person, assume that everyone who wants to work hides identifies as male. This is such uber-sexist bullshit. Working hides has nothing to do with "manliness" or "masculinity", working and wearing hides doesn't make one more manly, it is *not* a reflection or indicator of patriarchy, and it is not exclusively for men. By writing this zine I want to inspire men, women, transpeople, and children of all genders to work with and wear hides.

Finally, a note on respect. I'm not necessarily encouraging people to kill our non-human brothers and sisters in order to remove their hides. In truth, almost all of the hides I work come from roadkill that I scavenge. On occasion, I've also gotten hides from ranchers who slaughter members of their herds and don't use the skins. These are both excellent ways to acquire hides at present.

However, if you choose to take the life of any animal, please show deep respect when doing so. Killing should not be a flippant task, and killing recklessly and with no consideration for the spirit and

life-experience of one's prey is despicable and all too common. If you take an animal's life and you intend to use the skin, please also use every other part of the animal: sinew, meat, brains (for tanning), bones, antlers, etc. And please, whether or not you believe it matters, pay due respect to the creature for its life and death. It's not a matter of religion or spirituality, it's about cultivating an attitude of reverence toward all life.

Step #1: Skinning

The first step in working a hide is obviously removing it from the animal to which it is attached. This skill seems daunting at first, but it's actually quite simple once you've gotten the hang of it. In order to skin animals, you must have the proper tools to do so. This can be a metal knife, bone knife, or a sharp piece of obsidian, flint, or chert. I've even gotten by in a pinch with a very sharp piece of basalt, which is typically a dull, hard rock.

To begin skinning an animal, you must decide whether or not to suspend the creature or skin it on the ground. I pretty much always skin animals on the ground, but many people claim it is easier to skin animals if they are hung from branches or some other higher-up object. If you choose this method, you will need cordage, rope, or strong vines in addition to a cutting tool.

Whichever method you choose, the next step is to make an incision. This first cut either comes at the anus and moves up toward the throat, or starts at the throat and moves down toward the anus. There is no consensus about which cut is superior, but I typically start at the throat and move down to the anus.

Whichever way you cut, be careful not to puncture the anus, and be careful not to cut into the penis if the creature is male. A lot of folks suggest tying the penis off with cordage before beginning skinning, but I don't usually. This is to prevent urine from leaking out onto the hide and meat, which is freakin' gross. It isn't entirely necessary

Another method that can be used in the knee buffing method. This involves pulling and stretching the hide repeatedly over one's knee. This is very similar to the buffing method, except that it uses one's body rather than external devices to buff the hide.

After softening a hide for an extended period, you may choose to tan the hide again and then continue working it. This isn't necessary, but can help to further preserve and soften the hide.

Step #6: Smoking the Hide

The final step in working animal hides is smoking them. Allowing a hide to be saturated in aromatic smoke for extended periods of time further tans it, softens the skin fibers, draws the whole hide together, helps to waterproof the hide, and acts as an insect repellent.

Many people use elaborate methods for smoking, such as constructing smoke boxes or sewing hides into tubes and placing them above fires. I usually just take the time to sit with a bed of coals and lay on the smoking materials intermittently, all the while holding the tanned hide above the smoking material.

Before smoking a hide, you must collect the necessary plant materials. A great variety of plants can be used for smoking hides, but I have a few favorites. Any plant matter that is aromatic and high in tannins will do, but obviously plants that smell more pleasant are more desirable. I typically use Western Red Cedar and/or Rosemary, Douglas-Fir, Sage, Tarragon, Mugwort, Pines, and other plants can be used as well. Feel free to experiment with your own materials.

To smoke a hide, first create a large fire. Allow the fire to accumulate a big bed of coals and you're ready for smoking. Lay the plant material you've gathered on top of the coals, and ensure that the hide soaks up the smoke. Using green plant matter works much better for smoking hides, as dry, brown plant matter is likely to catch

matter how they are combined. Feel free to experiment with your own tannic cocktails.

Step #5: Softening the Hide

This is the second to last step I take when working hides, and it isn't an easy one. There's little challenge to softening the hide, but it's a lot of physical effort, especially with large hides like elk and bear.

Once they are tanned, hides can be softened in a number of ways. For small hides, like squirrel, possum, raccoon, and other small mammals, I soften the hides by hand. If you're ever crinkled a paper towel for hours on end until it's the softest conceivable thing in the universe, this method will come naturally to you. Essentially, hand softening hides amounts to wrinkling and crinkling and folding hides by hand again and again until they are soft and pliable.

For larger hides, like elk, sheep, bear and the like, I usually use foot softening. This basically amounts to folding the hide over in various ways and stomping the shit out of it (though not disrespectfully). Large hides can be worked by hand, but this usually results in massive fatigue due to their size and unwieldiness. By stomping, I don't mean to imply furious footwork, but a heavy stepping upon. Hides worked with this method don't usually get as soft as hand worked hides, but they can be softened a great deal and then worked by hand.

Whether I'm working a small or large hide, I usually use an additional method to hand or foot softening. This method, buffing, involves folding the hide up into a tube and pulling it rapidly back and forth on a beam, tree, branch, cable, fence post, or other surface. I find that trees with stiff, unmovable bark, like Western Dogwood, work well, because their bark slightly abrades the skin and thus softens it. When using this method, make sure not to rub the hair side of the hide on the surface, otherwise it will all pull out and be ruined. If you removed the hair, buff both sides at a variety of angles.

though, if you're very careful.

If you're skinning a female creature, a straight line from the throat to the anus should be made. If you're skinning a male, however, I suggest going around the genital area on either side to avoid the penis and testicles altogether. The first diagram below depicts a male bear to show my suggested method for avoiding male genitals.

After making the initial slit down the torso, the next step is to make incisions originating at this center line and trailing down each of the limbs. Once this is done, you must decide whether or not you want to the final skin to include the face. Skinning the face off of the skull is in my opinion the most difficult part of skinning animals. If you decide to keep the face on, continue the incision from anus to throat all the way up to the end of the animal's lower jaw. If you decide not to skin the face (which will result in a freakish zombie-corpse when you're done), cut a circular line around the animal's throat that joins the center incision down the torso. For an example of face-off skinning, see diagram 1. For an example of face-on skinning, see diagram 2.

Once all of the incisions have been made, you essentially remove the skin like a fur coat on a human. Begin taking it off at the shoulders by pulling at the incisions you've made and cutting away at the fascia, or whitish tissue underneath the skin. You'll also want to get as much fat and muscle tissue (meat) off of the skin as possible. Be very careful at this point to try and avoid cutting into the meat. If you're puncturing meat, you're going too deep. Once you get a feel for the thickness of the skin, and a feel for where the skin ends and the connective tissue begins, you should easily be able to scrape away the skin from the undesired parts.

When you have made your incisions large enough to get a hand between the skin and the inner flesh, I recommend using your hand and fisting the skin off of the other parts rather than using your

cutting tool to hack it away. This is gentler on the skin and will result in fewer cuts and abrasions to the final product. By using a combination of your cutting tool and your hands, you should be able to almost completely remove the skin from the animal's corpse.

The one exception to this is tails. Tails are incredibly difficult to skin without making egregious errors, and they are equally hard to tan and work. However, for animals with gorgeous tails, like raccoons and foxes, this can be an especially rewarding finished product. I wear a raccoon tail in my hair most days, and it always reminds me of the time and devotion I put into working it.

In order to skin a tail, make an incision from the anus to the tip of the tail. Be careful to avoid actually cutting the anus, and pay extra attention to the tail skin and flesh as you cut downward. Once the incision is made, carefully open up the incision with your cutting tool and/or hands, and gently remove the skin from the body. This is the point at which skin ripping and breaking can occur, so be gentle. On some animals, it may be very difficult to remove the very tip of the tail without also removing the bones and flesh inside. I've found that this is usually okay, and will not produce a significant amount of grossness, stench, or rot. This only applies to the last little bit of the tail, though.

Like the tail, working with the faces of animals is very rough going. When removing the face skin from the skull, make sure not to puncture the eyes or the skull itself if it is not already broken. Some tanning methods use brains to tan the hide, so breaking the skull and allowing the brains to leak out wastes an integral component of the tanning process. Plus, brains are yucky.

This should cover all the steps you need to learn to skin an animal. See the diagrams below for more information.

own hide."? Well, it's true. Brain tanning is a disgusting but incredibly useful and easy way to tan hides.

The first hide I ever worked was a little squirrel that got hit by a car while I was visiting my mom some year back. Mom was intrigued, and my traveling partner and I were certainly thrilled. After we (painstakingly and with no skill) skinned the squirrel, my partner cracked open the skull and got out the brains. We did a little quick research and discovered how to use the brains and applied them to the skin. The hide turned out wonderfully, and I still have it today.

In order to use brains to tan a hide, you first have to crack open the skull if it isn't already broken. This can be a little, er, unnerving. The first time I used brain tanning, I was a little too squeamish to break the skull and handle the brains. Luckily for me, my traveling partner wasn't squeamish, and she handled all the brainy mess. If you're going to use this method, steel yourself against the gross and try to stomach the cracking sound.

Once the brains are removed, they must be somewhat diluted with water to use them. Heat some water to a temperature that's almost too uncomfortable to touch, then mix with the brains. You don't need too much water, just enough to mix the brains in and make them liquid. When the water and brains are mixed together, you've got a tanning solution.

Brain tanning solution, once mixed together, is used in the same way described in the acorn tanning section above.

Mixed Methods of Tanning

Occasionally, I get the urge to experiment with tanning solutions I haven't used before. For example, I've mixed eggs, brains, and acorns before. On several occasions, I've mixed acorn tannins with brains. And once in a while I'll mix acorns and bark and possibly nuts. Because all of these substances contain tannins, it doesn't really

of tannins and work this coat in as well. That's pretty much it for the acorn tanning process, though on larger hides you may wish to apply further coats. You may also want to re-tan the hide after softening it, as described in the next step.

Bark Tanning

This method is pretty much identical to acorn tanning, with the only difference being the substance used to acquire tannins. Rather than using acorns, hide tanners can also use a tremendous number of other plants that are high in tannic acid. Just about every plant in existence contains tannins, though some are particularly rich in these compounds. A short list includes: oak bark, firs, willows, chestnuts, sumac leaves, oak galls, birch, alder, hemlock, tea leaves, coffee beans, rowan bark and berries, pomegranate skin, unripe persimmon, hazel and hazelnuts, walnuts, pecan bark and nuts, cinnamon bark, and so on.

Extracting the tannins in bark, nuts, and fruit rind is done by the same method described in the acorn tanning section above. When choosing bark or other plant material to use, make sure to harvest and use dry material, as tannins are water soluble and will have been leached out of wet plant matter found in the wild.

When using bark (or nut or fruit rind) tanning solution, the method of use is identical to the method described in the acorn tanning section above.

Egg Tanning

I've heard from a few friends and several strangers that eggs can be used in place of brains to tan hides. I've only tried it once, and, honestly, touching liquidy egg goop is really gnarly. It worked okay, but I don't really know enough about this method to describe or advocate for it. Feel free to experiment on your own.

Brain Tanning

Ever heard the expression, "Every animal has enough brains to tan its

Diagram #1: Face-off Method on a male bear, notice the incision pattern around the genitals and circular incision around neck

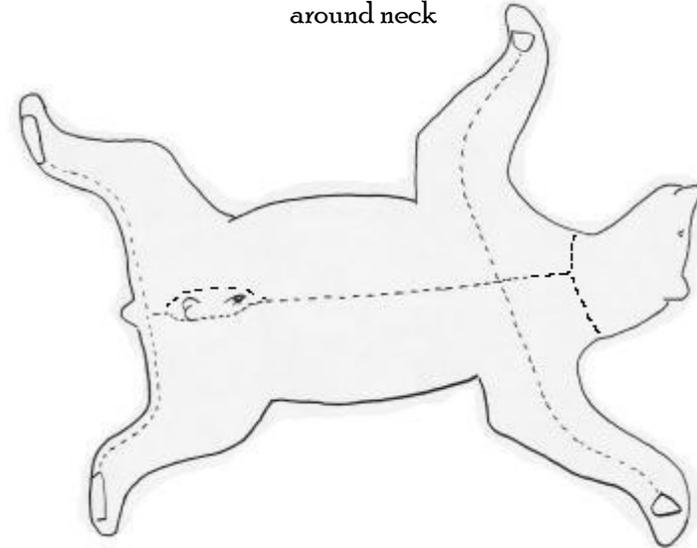
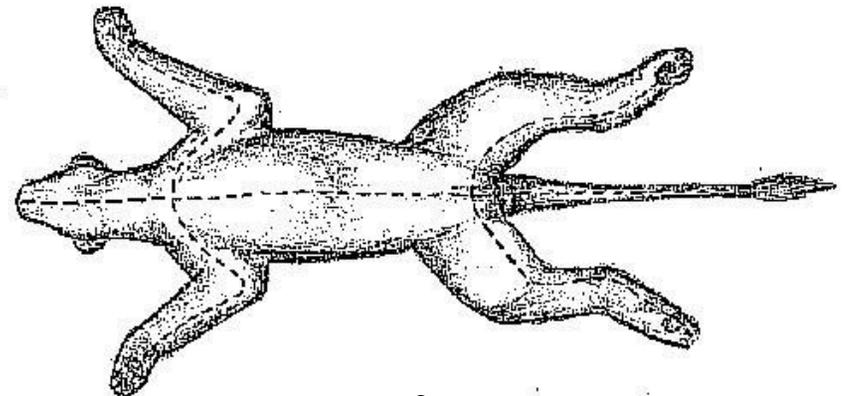


Diagram #2: Face-on Method on a female cougar, notice the straight belly incision and cut up the throat to the jaw



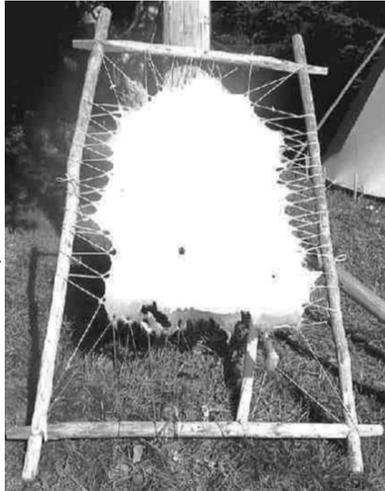
Optional Step: Dehairing the Hide

Some people want to remove the hair from hides they're working. I don't understand this, and I think it's wasteful. However, there are some applications for hairless leather that make dehairing worthwhile. There are many ways to remove hair from hides after skinning them. The easiest method I'm aware of is soaking the hide in water for a day or two. Several Native American peoples placed hides in moving streams when they wanted to remove their hair. I recommend bathtubs. When attempting to remove hair, check the status of the hide every once in a while by tugging on the hair. When it is coming off easily in handfuls, it's done soaking. If this method doesn't work for you, feel free to look into others.

Step #2: Stretching the Hide

The next step I always take is to stretch the freshly-skinned hide until it is dry. Not everyone does this step, because, as I mentioned earlier, there are a million ways to skin and work hides. I recommend this, though, because it's the only method I know.

Stretching the hide can be done in a few different ways. The first is to use a rack, which is easily made by lashing four pieces of bamboo or other straight sticks together. Such racks must be large enough to accommodate the hide. Once the rack is available, tiny holes should be made around the length of the hide at roughly 1" intervals (smaller for small creatures). Then, using cordage or rope, the hide must be tied to the rack so that each of the pieces of rope or cordage is taut. See the picture at right for an idea of how this should look.



the skin itself, fighting off decomposition. And in the case of hair-removed hides, tannins help make the skin waterproof.

Tannins, otherwise known as tannic acid, are the chemical compounds responsible for tanning hides and the substance responsible for that puckering feeling in your mouth when you eat unripe fruit. Tannins are found in acorns, other bitter plant matter and unripe fruits, tree bark, brains, and eggs in large quantities. All of these substances can be used to tan hides, and will be examined below.

Acorn Tanning

Acorns are the delightfully cute nut of oak trees. These nuts contain massive amounts of tannins, which is why we humans must boil the tannins out of them to make them edible and palatable.

In order to make tannic acid solution from acorns, gather a ton of them in the autumn when they're falling from trees. If you don't live in an area where oaks grow, this method is obviously not for you. Once you've gathered a bunch of acorns (at least several handfuls), place them in a pot and fill the pot with water. Boil the acorns until the water is dark brown or black. Darker shades are more desirable, because they mean a greater tannin content.

Once you've made the tanning solution, allow it to cool and it's ready to use. Tannin water last pretty much indefinitely if kept in a bottle or jar, and has a number of other medicinal and practical uses as outlined in my zine *Edible, Medicinal, & Utilitarian Plants, Volume I*. This zine is free on the Yggdrasil Distro website, yggdrasildistro.wordpress.com.

When you're ready to tan a hide with your acorn solution, simply rub a liberal coat of tannin water on the non-hair side. If you removed the hair, rub it on both sides. Then, work the tannins in by hand until the hide is mostly or completely dry. Once dry, rub on another coat

First, there's going to be a lot of fat. Save it, as it is useful for a number of practical applications that this zine doesn't explore. Second, and most importantly: BE CAREFUL NOT TO SKIN TOO DEEPLY! This is crucial to not destroying the hide.

It's easy to go very deep with fatty animals because there's always a layer of fat below what you've scraped off. To prevent endless scraping of fat on greasy creatures, once you have initially removed the hide I suggest using oats, rice, or some other dry grain or plant matter to soak up the fat on the skin. This is done by covering the skin (non-hair side) with the dry matter and rolling it up for a day or so. This allows the oats, rice, dry grass, or whatever to suck up much of the fat, and makes the scraping process much easier.

When actually scraping fatty hides, it is sometimes okay to stop scraping even if little liquid lines of fat are still coming out. Moving on to the tanning step with such hides helps expel the rest of the fat by contracting the skin itself.

You'll know that you've scraped too far on hides when a great deal of the hair easily pulls through the non-hair side. Sometimes, hides also get incredibly brittle, hard, and dry when they have been scraped too much. Try to avoid this at all costs, as it almost entirely ruins hides.

Step #4: Tanning the Hide

This is one of the last steps in working an animal hide.

Congratulations if you've made it this far, because it's very hard to make an irreparable mistake from this point on.

Once a hide has been skinned, stretched, and scraped, it must be tanned to give it longevity. Tanning hides has several important effects. First, the process of tanning makes the fibers in the skin contract and get tighter. This, in turn, locks in the hair (if it's still on) and gives the hide a longer lifespan. It also acts as a preservative for

If you don't want to use a rack or don't have the materials needed to make one at hand, there are other methods for stretching the hide. These include staking the hide to the ground and nailing the hide to wooden surfaces.

Staking the hide to the ground involves making the same series of little holes at roughly uniform intervals all the way around the hide. Then, stakes or sticks are driven through the holes and into the ground. Once all the holes are staked, the hide should be taut and should be elevated off the ground, otherwise there will be no air flow to the bottom side, and it will collect moisture and bugs. Staking hides to the ground to dry them should only be used in drier climates, like deserts. Using this method in wet areas, like here in the Pacific Northwest, is a bad idea, except in summer. The picture on the cover illustrates hide staking, and also shows an indigenous woman scraping the hide as described in the next step.

Besides staking and racking, you can also nail hides to wooden surfaces. This is the method I use most, mainly because it's lazy and easy. Instead of making small holes around the edge of the hide for cordage, small holes are made uniformly around the hide by nailing it to a fence or large piece of wood. Hides can also be nailed to trees. Nailing hides to trees is often done by Appalachian mountainfolk, but because of its destructive nature, I oppose it. Anyway, hides can be nailed to fences, boards, small pieces of wood, and the like. One of the only problems with this method is that it tends to attract flies and thus maggots to the side that touches the surface. Maggots will eat the hair off of hides and can eat large holes in the skin itself. If you use this method and flies infest your hide, make sure once or twice a day to go over it and kill (or otherwise remove) the maggots.

No matter which method you use for stretching, the hide should be allowed to stretch until dry. The drier the hide is, the easier the next step will be, but don't leave hides stretching so long that they

become petrified. Also, make sure that the hide is stretched out evenly in all places. If only a few parts of the hide are stretched, the non-stretched parts will contract and get much smaller than the stretched parts. This results in a very funky hide. See the picture above for an example of a well-stretched hide.

Step #3: Fleshing & Scraping the Hide

When the hide has finished drying in the stretching phase, the next step I always take is fleshing and scraping the hide. Fleshing and scraping essentially mean the same thing: fleshing refers to getting any large chunks of meat off the hide, while scraping refers to removing the fat and extra layers of skin left over. This stage of the hide working process is all about removing any excess material from the skin itself. This step can also include scraping the rest of the hair off the hide if you've chosen to remove the hair.

When I do this step, I usually just scrape the hide on whatever surface I've nailed it to. Hides can be scraped while on stretching racks and while staked to the ground, as seen in the previous picture. Otherwise, hides can be removed from their stretching apparatus and fleshed and scraped on what is known as a fleshing beam. This is a debarked, smooth, round log on an upright bi-pod. Its circular shape allows one to manipulate the hide and use angles and leverage to better scrape the hide. The following picture depicts a 16th century tanner working a hide on a fleshing beam.

When scraping the hide, use your cutting tool at a right angle to the skin and scrape away all the excess flesh and fat. You'll pretty much always know when to stop scraping, because no more pearly fluid fat will come out when you scrape. This step is an act of dull abrasion, not an act of cutting. Be careful not to puncture the hide while you scrape, otherwise the final product will suffer. If you're removing hair, the hair side of the hide doesn't need flesh and fat removed. Once hair is scraped off in such cases, the hair side needs no further scraping.



Tanner Working on a Fleshing Beam, 16th Century

When you have completely finished scraping a hide, it is ready to be tanned.

A Note on Scraping Fatty and/or Greasy Animal Hides
Unfortunately, many mammals, such as raccoons and possums, have adapted to the rise in cities (i.e.- civilization and domestication) by scavenging what they can from human settlements. This means they're dumpster diving a lot of nasty, fattening, greasy shit, which results in fatter, greasier animals. When skinning such animals, I have a few special pointers to give which I've had to learn the hard way.