

The Essentialist

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TRADITIONAL BRAIN TANNING

This method of tanning hides has been used by traditional peoples around the world, including Native Americans. Why brains? Every animal has sufficient brains to tan its hide; therefore, you have the necessary material on hand when you butcher out your animal.

Precaution: do not use the brains of an animal with Chronic Wasting Disease, as the disease agent is found in the central nervous system tissue. Caution should be used with any animal that exhibits strange behavior, is ill or found dead from no obvious cause, as some diseases can be contracted from handling diseased tissue. Any dead animal found, not showing an obvious cause of death, should be buried.

Tools and Equipment

Fleshing knife	Frame	Scraper	3/16" steel cable/paddle
Fleshing beam	Cord	Awl	2 wire rope clamps, 3/16"
	Smoker	Nails (Optional)	

Steps in Tanning Procedure

Fleshing

Once you skin out the animal, you need to remove the fat and meat still adhering to the hide. You will need:

- Fleshing beam, such as a peeled log, about 12" in diameter, braced against a stump at about a 45 degree angle, and about waist high. Or planed lumber (see sketch).
- Fleshing knife: should be a dull knife so it won't cut the hide, but just peels off the tissue.

Lay hide out on the fleshing beam, hair side down, and using your fleshing knife, push the meat and fat away from you on the hide. Protect your clothes with a leather or plastic apron as you will be leaning against the hide at the top of the beam to hold it in place while you work.

Hold the blade pointing away from you and push down toward the bottom of the beam. You continue to work the hide until all the meat and fat are removed. (I always kept a couple of small rocks at hand to kill any ticks that were attached to the hides.)

Once you have cleared it all off, you are ready either to begin the tanning process or to salt the hide down for storage. If it is particularly bloody or caked with dirt you will want to wash it off first.

Salting

If you cannot tan the hide within a day or so, it is best to salt it down, to remove excess moisture. Use a fine grained salt without iodine. During this process, be sure you put your hides where animals cannot get to them.

1. Lay the hide out on a flat surface (hair side down), and pour a good amount of salt onto the center of the hide (the flesh side). Plan on about a pound of salt per pound of hide. Rub the salt onto the hide, being sure to cover every area of exposed skin.
2. When fully salted, fold the hide, flesh to flesh, roll it up and lay on a slanting board to drain overnight. The salt will draw excess moisture from the hide.
3. Next morning, shake off the wet salt, lay out the hide again, and re-apply a fresh layer of salt to the hide.
4. When it is finished draining, lay the hide out on a flat surface to dry in a dry area. This can take a couple of days, depending on the weather. Do not dry in direct sunlight or where temperatures are very high.
5. Dried hides can be stacked in a dry place until you are ready to tan them.

When you are ready to begin tanning, you need to soak the hides to to desalt and return them to a pliable state. If you are tanning a hide with the hair on, try to remove the salt with the least amount of water soaking the hair.

As I never salted down a fur before tanning, I do not have personal experience with that.

Removing the hair

If you are making leather, from say a deer or elk hide, you will need to remove the hair.

- Wet method: Soak hide in water, changing it every few days, until the bacteria builds up on the hide, causing the hair to “slip” or fall off. When it is pulling out easily, put hide back on the fleshing beam and scrape off the hair. Then stretch it on a frame and allow it to dry. This can be messy, and there is always the danger of possible infection if you have any open cuts on your hands and you come in contact with the wet hides, unless you wear rubber gloves.
- Dry method: This is easier, and usually quicker. After fleshing (if doing the tanning on a fresh hide), or after soaking and de-salting of a preserved hide, stretch hide in a frame to dry. When dry, use your scraper to remove the hair. As the scraper is sharper than the fleshing knife, care must be taken to avoid cutting the hide; pay attention to what you are doing, take care in the angle of scraping, and TAKE YOUR TIME. As with any task, practice improves the product, and speed is not a virtue.

Removing the hair exposes the thin membrane of the epidermis. Generally the hide will be a light brown, smooth surface. Use your scraper to remove the epidermis. This gives you a soft, suede finish to both sides of the hide. (Commercially tanned hides usually leave this on, for a grain side and a suede side). Again care is needed to remove this without cutting the hide. When you have removed this smooth brown film, the hide will be white and lightly fuzzy. Remove hide from frame and moisten so it is again pliable.

Tanning:

NOTE: If you're going to tan the hide right after butchering, keep the raw brains in your refrigerator (or ice box) until it's time to cook them. If you are not going to tan right away, freeze the raw brains.

1. When ready to tan, prepare the brains: Cover brains with water and cook in a small pot, just until they turn white. Then puree to a paste:
 - If you have a blender, put cooked brains in blender and whirl them into a paste. Use enough of the cooking water to make a smooth paste, but not runny.
 - Without a blender, you will need a piece of nylon screening. Wearing rubber gloves, squish cooked brains through the screen to produce the smooth paste.
2. Work brain paste into hides: Lay drained hide on flat surface; rub brain paste into the entire hide,
 - both sides if you are making leather;
 - only the flesh side if doing a hide with the hair on. Try to avoid getting the brain paste into the hair.
3. When finished, fold hide flesh side to flesh side, roll up, and put into a bucket or container in a cool place for about 3 days.
4. Remove from container, wash hide clean of brains, ring out and hang over a line or board until it dries out a little. With a fur, try to wash off the brains without drenching the hair. For deer and elk hides, an old hand wringer works very well to help remove the bulk of the water. The thinner the hide, the more quickly it dries so keep watch on it so it does not dry too much.
5. When hide is still moist and pliable, begin the Breaking Down process.

Breaking Down:

Inspect hide for small holes or tears. Sew them up, using artificial sinew to prevent them from being ripped further, during the softening process. Artificial sinew is made of waxed nylon, and is much stronger than regular thread. You can also use real sinew, but it is a "royal pain to work with," according to Fran.

Then work and stretch the hide while it dries, to keep its fibers from returning to the natural alignment, and hardening back into raw hide. The lecithin in the brains dissolves the glue holding the fibers together. If you keep the hide stretched in the drying process, the leather remains soft and pliable after it has dried. When the hide is fully dry, and soft, you have leather.

Two methods for stretching and drying:

- Pulling on a cable: To set up the tool, secure an upright post in the ground. Fasten the 3/16" wire clamps to the post, one near the top, and the other about 4' below the first. Attach the 3/16" steel cable to the two clamps, in a loop with about a foot and a half slack in it. When the hide is damp, but not dry, slide it through the loop in the cable and, using both hands, pull it back and forth in a sawing motion. Continually move it along the length and width of the hide so all areas are equally stretched. This must be continued until the hide is dry, and can take up to 5-6 hours, depending on how warm the area is and how wet the hide is when you begin. If you stop the stretching, for more than a few minutes, areas can dry hard and you will need to re-dampen the hide and begin again.

- Re-stringing in the frame, and using a wooden paddle: When lacing a hide into a frame, take care not to stretch it so tightly, that you pull it out of shape. It will shrink as it dries, so pull it taut but not tight, or it will either tweak out of shape or rip out the holes you have made with the awl. If putting back in a frame, start lacing it in while it is a little more damp than if working on the cable, to give yourself time to get it ready before it begins to dry. Now, take the paddle and press it against the hide, stretching it. Work the entire hide, systematically so that every area gets equal pressure. Remove it from the frame just a little shy of totally dry, and work it on the cable to make it a little softer.

Smoking:

Your hide is now soft and white, and vulnerable to moisture. An unsmoked hide will return to the raw hide state if it gets wet, so it is necessary to water-proof it with at least a little smoke. Different woods produce different colors in your smoked hide. The following are ones with which I have experience:

- Cottonwood bark gives a golden color;
- Tamarack (Western Larch) bark gives a light tan.
- Do not use alder bark unless you want a lime green leather.

If you have a smokehouse: Hang hide inside and smoke it to the desired degree of color.

Without a smokehouse, rig a simple device with two 5-gallon metal cans, a piece of stove pipe and a length of canvas. See sketch.

With or without a smokehouse: Remember, you do not want to cook the hide, you want a cool smoke. It helps to keep a spray bottle of water at hand to douse the flames and maintain just the coals with the smoldering bark. As with smoking meat, you can soak the bark so it smolders more than it bursts into flames.

Sources of Materials

Powder Horn, Kalispell

References

Chronic Wasting Disease web site: www.cwd-info.org

Books:

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"Deer skins to Buckskins:How to tan with natural materials" by Matt Richards, Backcountry Publishing, Rexford, MT