from the book Buckskin: The Ancient Art of Braintanning
by Steven Edholm and Tamara Wilder
courtesy of paleotechnics

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CARE AND STORAGE OF RAWHIDES

Fresh, or "green", hides are ideal to work with. They are easy to scrape and, unlike dried skins, need no resoaking. In fact, if they haven't been allowed to dry out at all, hides may sometimes be scraped with no soaking whatsoever. If it were feasible for us to flesh and scrape the hair sides of all skins while fresh and forego the following procedures, we would. Unfortunately, it rarely works out that way for us, since skins usually come in large batches during already busy seasons.

Not all hides can be wrought up into buckskin immediately and so, must be preserved until such time as they may be worked on. The preservation methods that we know and have used are: ***freezing drying,*** and ***salting.***

Before discussing the particulars of these three methods, let's take a look at what might go wrong with skins before and/or during storage.

PUTREFACTION, in our case the bacterial decay of proteins, can ruin hides very quickly and pose a health risk to the tanner. Putrefaction normally happens when hides are simply neglected for too long through procrastination or various other circumstances. *Hides, in general, should be dealt with in a timely fashion;* your nose will serve as a putrefaction gauge.

Putrefaction is accelerated by heat and happens in the presence of water. Once the skin is dry, the bacteria either die or become inactive. Salt, in sufficient concentration, also kills or inhibits most bacterial growth; freezing does the same.

MOULDING can be a problem in damp climates or if dried skins get wet during storage. The hide fiber is hydrophilic, meaning that the fibers of the skin attract moisture; if the atmospheric humidity is high enough, the skin can draw excessive moisture from the air and become damp enough to mould. Storing dried skins in a dry area, away from any potential drips, should prevent moulding.

We have, on occasion, seen some mould on our salted skins. We don't know why and don't know how to prevent it. Salt is also hydrophilic; so, if you are storing skins which have been scraped but from which all the salt has not been rinsed, they will attract more moisture from the air than a skin which has never been salted. This attracted moisture may lead to slow decay and mould, since there will not be enough salt left in the skin to preserve it. Therefore, it is best not to leave skins in a "half salted" state, unless the air is very dry.

GREASE-BURN happens when a skin is dried with fat left on it and is then exposed to heat. The fat melts into the skin and weakens (destroys) the fiber structure. Badly grease-burned skin is very weak and will tear and fall apart when subjected to the rigorous braintanning process. Fortunately, deer, elk, pronghorn, and moose hides don't grease-burn as easily as some other skins: namely oily furbearers like skunk, coon, bear, and the likes of them. Grease-burning is easy enough to avoid, just be sure to flesh or peel all fat from the skins before drying them.

PESTS boil down to dogs and a few insect species. Dogs can be infuriating. They will literally eat skins, wet or dry. Be careful, you've been warned.

We've never had a problem with bugs in our salted skins, but some friends of ours have. Our bug problems have all been in unsalted dried skins. Dermestid beetles and clothes moths have been the culprits, and once your hides are infested, their population can grow at an exponential rate. The larvae eat skin, the damage appearing as little pathways of missing hair or tissue. If left too long, they will chew holes all the way through the dermis, leaving numerous holes and thin spots. The moths will also invade your whole house and get into your clothes and dried foods.

Check dried skins every month or so for insect damage, especially if you start seeing a lot of little moths flying around. Moths prefer darkness and tight spaces and don't like air, heat, and sunshine. A bunch of skins rolled or wadded up in a dark corner are likely to support a population of moths. Occasional airing out in bright sunshine of suspect or infested hides can help.

Borax can be used to deter insect pests, but it is very toxic and we don't recommend its use.

A better option is to use plants that are known to be a bane to insects. Our favorites in this category are the *Artemisias,* mugwort and sagebrush. These two seem to have worked for us before in plastic bags where the aromatic smell is trapped, making a whole microenvironment distasteful to insects. Other plants to try would be bay leaves *(Umbellularia californica),* spicebush bark *(Calycanthus sp.),* lavender flowers *(Lavandula sp.),* juniper boughs *(Juniperous sp.),* eucalyptus leaves *(Eucalyptus sp.),* and the old standard, cedar. Use a lot of the dry plant, crushed up in a sealed environment, like a chest or plastic bag.

Similarly, bug prone skins can be stored with smoked hides and used smoking skirts; again, this will be more effective in a sealed or semi-sealed environment. The creosote from used smoking skirts will color skin with which it is in direct contact, but that won't be a problem if you plan to smoke the skins.

Freezing the infested material will kill the larvae. Our buddy Steve Watts of the Schiele Museum of Natural History in Gastonia, North Carolina says that the infested material is best frozen, thawed briefly, and then frozen again. Otherwise, the larvae may simply go dormant in the first freezing and not die.

METHODS BY WHICH SKINS CAN BE PRESERVED

FREEZING: In many ways, freezing is the simplest way to preserve any kind of skin. The skins needn't be fleshed nor salted. There is no washing out of salt or resoaking of dried out skins. The skins, when thawed, remain, in all noticeable respects, just like fresh skins and are, thus, easy to scrape. Frozen skins are also safe from pest attacks (except that a student of ours had his hide freezer unplugged by possums and all of his hides spoiled!).

The negative side of freezing skins is that it's expensive and uses a lot of energy resources.

Freezing is easy. Just put the skins in plastic bags and throw them in the freezer. About all that can go wrong, aside from possums and power failures, is that any food stored in the freezer may end up tasting "hidey". Careful double or triple bagging can help alleviate this, but it's best to use separate freezers for any long term storage. Skins should, however, be bagged even if they are the sole freezer occupants. Otherwise, they may become freeze-dried.

SALTING: Salting has become the method of hide preservation that we use the most. As in freezing, the skin needn't be fleshed (except for the removal of huge chunks of meat or fat), which is an important consideration for us, since hides come in large batches during hunting season (August here), and trying to flesh and dry thirty skins in the heat of summer, before they rot, is a real chore.

It is commonly said that hides intended for use as buckskin should not be salted. In the dry-scrape method, salting does have the disadvantage of making the skin difficult to dry out completely in the frame for scraping. For wet-scraping, however, we have noticed no reason to avoid salted skins, as long as they are well cared for and thoroughly rinsed out during processing.

Salted skins can be kept in a damp (not really wet) state and still not decay, and we think it is desirable to keep them this way. Dried out salted skins retain few of the advantages gained in salting a skin in the first place, namely: ease of resoaking, ease of scraping, and prevention of grease-burn.

We haven't had dermis-eating insects in our salted skins. Some friends have, though; so, salted skins should be watched for signs of insect damage. We consider salting to be a notch above drying as regards insect problems, but we may have just been lucky so far.

Don't store salted skins wet for too long; they aren't completely stable. There are bacteria that live in salty environments, known as halophiles. A common halophilic bacteria forms a red coloration on salted skins (red spot). Store wet salted skins in a cool area, and try to get around to scraping them within six months.

The greatest disadvantage to salting hides is that the salt must be disposed of where it will not kill plants. Without salt, hide water and hide scraps have tremendous fertilizing value and are a boon to plants. Salt, however, will kill or stunt most plants, making salty leftovers a problematic waste product. Our usual solution to this problem is to dump the first couple of rinsings on driveways and such to stunt or kill weeds. Later rinsings go on the asparagus which actually likes salt There is also loose salt left over which, being bloody and dirty, can typically be reused only once, if at all.

Other ***problems with salted skins are:***
-All of the salt must be washed out of salted skins which requires much water.
-They can drip salty, bloody water around.
-They can be kind of stinky.
-Salt rusts metal, including nearby metal which is not even in direct contact with the salt.

Salting is not difficult and salt is not expensive. Fine water softening salt can be purchased at a hardware or farm supply store in fifty pound bags; one of these bags will do seven or eight medium sized skins. Rock salt is okay for very large thick hides but finer salt is preferred for lighter skins. Regular uniodized table or pickling salt works fine but is relatively expensive.

It is often difficult to find a suitable site for the salting and storage of hides. Adequate drainage must be provided, since they will drip liquid for a few days after the initial salting. In high humidity, salted skins will accumulate moisture out of the air and can begin dripping all over again. The liquid, in either case, cannot be allowed to drain on plants that you want to stay alive. Any ferrous metals close by will rust, and any rust that touches a skin will stain it permanently. Dogs like salted skins, too. Considering all of this, a cool, root cellar type of shed with a sloping cement floor, humidity controls, built in dog traps, and a drain that leads to self cleaning evaporation pans for salt retrieval would be ideal.

This dream set-up is beyond our means; so, after the initial drainage, when the hides are still in a wet and flexible state, fold them flesh to flesh and put them into plastic tubs or barrels for storage. This way, the skins are kept moist and the

smell contained. Put something non-metal in the bottom of the tub to allow liquid to collect away from the hides should they decide to drain more; some rocks or boards will work fine.

For the initial salting and draining, lay the skin out, flesh side up, on an inclined pallet, layer of boards, adventitious slope, or whatever you might be able to come up with to provide drainage. Pull off any large chunks of fat or flesh thicker than say three quarters of an inch. Throw a liberal amount of salt on the skin and rub it into all parts, being sure to get the edges, which have a tendency to curl upon themselves. Don't skimp on the salt. There's no need to have a half inch over the whole skin, but there should be an obvious layer. If there are many skins to salt, just keep laying and salting one atop another in a stack like pancakes. Allow the skins to drain and the salt to penetrate for a few hours to a day before moving or storing.

DRYING: Drying skins is the cheap, low tech method. There is neither salt nor electricity to pay for as in the other two options. The only things you may require are stakes to dry the skins flat, and those, though recommended, are optional. If the skins are staked out flat and dried, as will be described, they can be stored in rolls and take up a minimum of space. They are also easier to soak up than hides which have dried into crinkly masses. There is little objectionable odor from dried skins. There are, however, many down sides to storing skins dried.

The hides must be thoroughly fleshed before they are dried out. Otherwise, any fat could potentially grease-burn the skin. Fleshing can take much time and energy if you have a lot of hides. If the skin is removed from the animal very cleanly and no fat is left on, it may be dried without first fleshing. Such a situation is uncommon, and you will likely need to flesh skins before drying them. Refer to Chapter 14, Fleshing, for details on this procedure.

Dried skins are more difficult to resoak for the scraping process, requiring much stretching and pulling in water to get them fully flexible and saturated, which can add up to some considerable time. Also, dried skins seem to be much more smelly by the time that they're ripe enough to scrape easily. The smell of resoaked, dried skins is different and nastier than salted, fresh, or frozen skins. Since they take longer to both soak up and ripen up enough to scrape, they are more likely to be oversoaked,

even if you're on top of things. Even when properly soaked, dried skins are more difficult to scrape on the average.

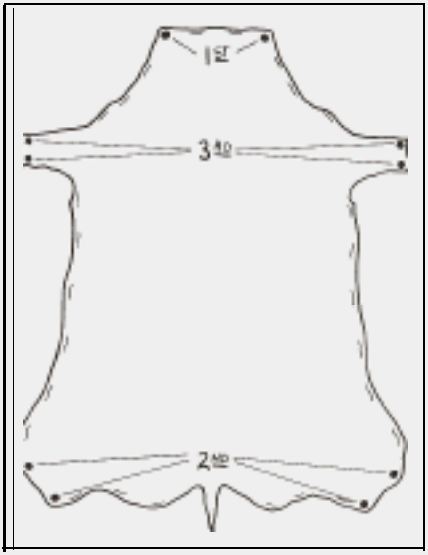
Dried skins, if left long enough, will eventually be attacked by insects and, therefore, must be inspected periodically. Mice will sometimes nest in them and/or chew them up for nesting material.

We make drying skins sound like a really bad way to go. We really don't like dealing with dried out skins at all anymore and try to avoid it as much as possible. Still, we used drying as our sole means of skin preservation for probably our first two or three hundred hides. It can be a good way to go, and we still practice it when it's the only convenient, suitable option.

The simplest way to dry skins is to lay them, hair side down, in the sun. Be sure that all edges of the skin remain opened, so that they may dry thoroughly. A few small rocks and twigs, or some cornmeal or fine dust, rubbed in at any prone to curl edges can help assure that the edges don't curl.

A better way is to stake the skins out to dry. A dry skin is difficult to resoak as a rule, but one that has not been dried stretched out is that much more difficult. The one disadvantage to staking out is that a small amount of skin is lost on the edges.

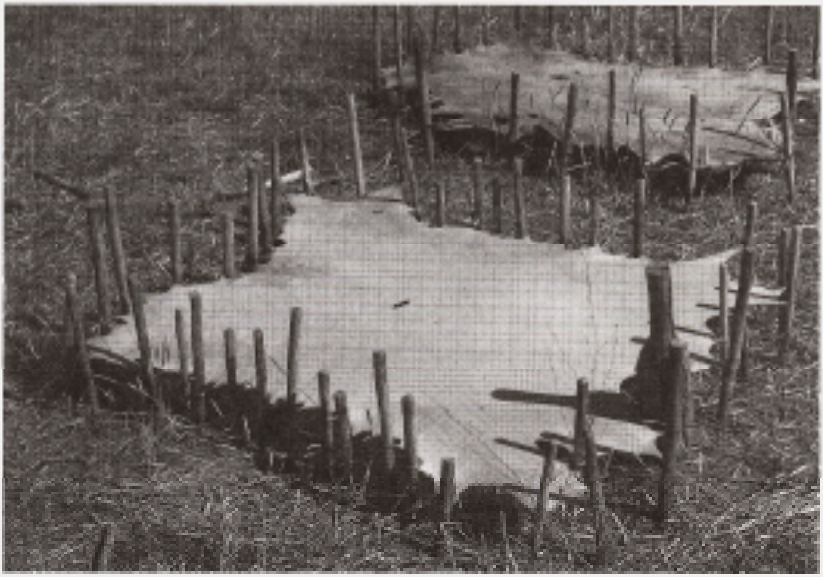
Stakes are made as described in Chapter 7, Tools and Sharpening. Cut slits parallel to, and about one quarter inch in from, the edge, every four to six inches. The hide should be staked out several inches above the ground to encourage air cir-



Order of stake placement when staking skins out. Also, order of tying skin into frame. The rest of the hide can be tied or staked at random.

culation. Stake the top of the neck first, then the back legs, then the front legs, and finally, the rest of the slits in whatever random order suits you.

Stake hides out in the morning, if possible, so that they will have time to dry. On very hot days, a couple of hours can be enough to dry thin skins. A full day in hot sun should do for most any deer skin.



Hides staked to the ground to dry. The skin in the foreground is already grained. The skin in the rear is only fleshed.