# **Tanning Tips for Taxidermists**

This is an overview of information and steps that will help you create a properly tanned skin that is in the best condition possible. It is important to keep in mind that with tanning it is vital to complete each step properly or the rest of the steps will not yield the optimum results.

#### **Limiting Bacteria**

The number one cause of a less than perfect, or even a ruined, skin is from slippage due to bacteria. Bacteria can be controlled. Assuming it's not your own personal skin, physical damage such as bad skinning cuts and drag marks is beyond your control. So, bacteria are what we are going to address. Bacteria needs three things to cause slippage: moisture, heat and time.

Time is pretty simple and straight forward. Take care of your skin ASAP and encourage your customers to do the same. Don't put anything with large body mass (coyotes, raccoon, fox, etc.) whole in the freezer, if at all possible. The large mass will take 2-3 days to thaw enough for skinning, but the ears will thaw in just few minutes. The time between when the ears are thawed and the rest of the body thaws is the problem. The easiest solution for this potential problem is to place freezer packs on the head and any other place that you need to keep cool until the whole carcass is thawed and ready to skin.

Moisture can sometimes be beyond your control, such as the animal being taken during bad weather, running through or ending up in a body of water, or in the case of some furbearers, being taken in a drowning set. The main thing is, if the specimen is dry when you receive it, keep it dry until it goes into rehydration. If a skin is extremely bloody, rinse the blood out. It's already wet with the blood anyway, which will accelerate the action of the bacteria. You're better off with wet from water than wet from blood and especially from internal body fluids. A little bit of blood, such as from an exit hole, isn't a big concern, just towel off most of the blood. Any skin that is wet needs most of the moisture removed before salting. Hanging the skin to drip and wringing it may be good enough. A washing machine on the spin cycle or a short tumble in a sawdust drum are good options.

Heat sounds like a simple problem to handle, but there are a couple of related things that you may not think about, they both are body heat. A freshly killed animal needs to be chilled before it is placed in a freezer. Fur and hollow hair are both good insulators, and insulation holds heat in just as well as it holds cold out, working the same as a thermos with a cold or hot drink inside. The other issue is when an animal is skinned while still retaining body heat and the skin is dropped in a tub or bagged right away. This is typically with big and heavy hides such as live-stock. When a hide is immediately dropped in something, it retains a lot of body heat in the center of the mass and will degrade quickly. To avoid this problem just make sure that the hide

is hung or laid out with minimal folds until it is chilled, then it can be folded and boxed or placed in a tub or tote.

### Fleshing

This is a step that seems to be a struggle for some but shouldn't be. Although there are big differences between different species, ultimately it comes down to removing all of the yellow fat and the vast majority of the red meat. The more fat and meat left on the skin, the harder it is for the salt to pull all of the fluids from the skin, which leaves more moisture in the skin to feed bacteria.

On the facial and small detail areas, like the paws and tails, fleshing needs to be done carefully. The most common method is with a blade and shaving it off by hand. Power methods like a wire wheel or sanding drum on a rotary tool work too, just be careful about creating heat from friction. This heat isn't going to create a bacteria problem, but it can "cook" the fats and body fluids turning them into a solid that will not "wash" out of the skin in the next steps. This is what is commonly referred to as a grease burn. No matter what method is used for removing the meat and fat from the face and small detail areas, it is important to make all your splits complete enough that there is no fold or bead left. The skin needs to be flat across the split area. This will make your final shaving much easier with less damage.

The main body skin of the specimen is best fleshed with a beam and a good knife. Learning to use it is an important part of the process for several reasons. With a little practice you can easily and quickly remove all the surface fat, red meat and membrane completely from some skins such as deer, elk, fox, coyote etc. while cleaning the bulk of the body skin areas on things like bear and raccoon, all of this just by a pushing motion. Typically, the back of the neck and shoulder are-



as of bear and raccoon are best handled with the sharp edge of the knife. Beaver and beef hides are a candidate for the sharp edge on most of the skin. Using the sharp edge has a little bit of a learning curve to it, but once you get the hang of it, the meat, fat and membrane come off fairly easy while using a slicing motion as you go down the beam. Let the knife do the work for you, don't force it.

Another big advantage of beaming a skin is the down pressure and pushing motion will literally squeeze a lot of the body fluids and fats right out of the skin fibers on fatty skins. You can see this, just take your knife back over a bear skin that has had the surface fat removed and watch in front of the blade as you push down the beam. You will see fat building up in front of the knife as you work it down. By using any other method of fleshing this will still be in the fibers and need to be removed chemically later in the process. All fats and fluids left in the skin will



hinder the salt drying process and also lead to faster and easier oxidation of the skin, a.k.a. grease burn.

In the same line, if a skin does have some moisture (bacteria fuel), in the fur or hair, this same downward pressure motion will push much of that moisture out of the hair/fur, again reducing bacteria potential.

Skins with deep rooted hair/fur, primarily bears and boars, should be fleshed from the tail toward the nose, this is for the same reasons listed in the shaving section below.

# Salting/Drying

With the skin properly fleshed, it's time to dry it. This process can vary depending on your future plans. If you want to dry skins for storage, or possibly to send out for tanning elsewhere, you can salt dry, or in some cases air dry, the skins. Any skin that you plan to eventually tan in your shop, I would suggest salt drying instead of air drying. Air drying works fine on thinner skins such as fur-bearers, but will still be a little more difficult to re-hydrate when tanning in shop. Air drying works by simply holding the skin tight so the moisture can evaporate out of the fibers. Salt drying wicks most of the moisture out of the fibers, along with a lot of the fats, fluids, blood, etc., reducing the moisture content to the point that the bacteria become inactive, then the skin can finish safely drying by evaporation. The additional removal of these fats and fluids is what makes your future steps easier when tanning in shop.

For salting skins, any fairly clean fine grade white salt will work fine. A common myth is that the salt needs to be non-iodized. However, that is not true. Iodized salt will work just fine, just avoid mineral salts. Another myth that is fairly common is you can't use salt with yellow prussiate of soda. Apparently, some associate the word soda with baking soda and think it will affect the pH. It won't, so don't worry about it. YPS is simply an anti-clumping agent.

When you salt a skin make sure it is completely covered: no unsalted folds on edges, under legs, around ears, etc. You want to use just enough salt that you can't see the skin through

damp salt. After you finish salting a skin, look back where you started. If the salt has already dampened up to the point you can see the skin through it, add a little more. Don't skimp on salt. I constantly tell people, salt is cheap, replacement skins are not.

Do not fold or roll your freshly salted skins, leave them lay flat. Folding or rolling just creates more places where the salt is not



making complete contact, plus moisture that is being wicked out of the skin will puddle in the skin instead of evaporating out, which is the goal of the process.

You can shake the first salting off after a day and re-salt with dry salt again, if you want. It may help the drying time a little. I've never seen where it made much difference, the first salting has already removed enough moisture to accomplish the goal anyway. After 48 to 72 hours, take the skin out from under the salt and hang for drying. Do not let the skins come in contact with steel, it will rust and burn the skin. Draping the skin over a board, like a 2 x 4 stood on edge works well, so does PE or PVC pipe. With an open skin, drape it so the hair side is in contact with the board. Keep in mind, the idea is to get the skin to dry. A cased or short incision skin will mean that hanging with skin touching can't be avoided, so flip the skin over after a day or two. The area that was in contact with the board will still be much damper than the exposed skin, just move the skin as needed so it all has a chance to dry.

As the skin is drying the excess salt will fall or brush off easily. If you are going to completely dry skins for storage or shipping either one, fold the skin as it is getting just about too stiff to fold, in such a way that delicate areas such as ears and noses are protected and won't get damaged in handling or shipping. If you are ready to proceed with tanning in shop, move to the step now.

## Rehydrating

This is one of the most misused or even abused steps in the tanning process. There is a lot of bad information out there and some of it keeps being touted as the best way. You need to keep in mind what the goal of getting your skin ready to tan is, and what helps meet that goal and what hinders the process.

For proper pickling, which is needed for proper tanning, the fibers of the skin need to be completely opened and relaxed. To accomplish this, you first need to understand what salt does in a solution: it creates pressure. In later steps, regulating that pressure with salt is needed. We will get to that later, but in the rehydration step that pressure is counterproductive. The idea is to completely hydrate the fibers so you once again have a loose and soft skin, only now without most of the fats and fluids that were in the skin initially. If you salted the skin, a lot of the fats and fluids were wicked out of the skin by the salt. If you air dried the skin, a lot of these were either sweated or evaporated out.

A good, commercial relaxing agent will help pull moisture into the skin, opening the fibers and allowing the surfactants in the relaxer to further clean fats and fluids from the skin, preparing the skin for a quick and efficient pickling process. Many of the commercial relaxers also have a bactericide, fungicide or both as part of their formula. This can be a benefit on skins that are in a questionable condition.

This is an important point. All skins, dry salted, wet salted, or air dried, need to be rehydrated before going into the pickle. This is where one of the worst pieces of information in the busi-

ness is commonly touted. I can't count the number of times that I have seen in print that a wet salted skin can just go right in the pickle. That is wrong and a big mistake. Remember, salt causes pressure and inhibits water from penetrating the fibers. A skin that has not been rehydrated and goes directly into a pickle will not loosen up properly because of the salt in the pickle. Combine that with a skin that is stiff with closed fibers because of the salting and the skin

will never loosen up properly for easy shaving and proper tanning. Over the years I have suggested rehydrating to many taxidermists that tanned their own capes and placed wet salted skins directly into the pickle. Every single one found they had much better results, made the skins easier to shave, and resulted in a skin with much better stretch.



Another horrible piece of rehydrating information is to use a brine solution. By this point, I think you understand why this is a bad idea so I won't dwell on it again. Just use a good commercial rehydrating/wetting agent that was formulated for the tanning/dressing industry and soak your skins until they are loose and stretchy before proceeding to the pickle.

#### Pickle

If everything was done properly to this point, this is about the simplest and most straight forward step in the process. The universal pickle will contain one pound of salt for each gallon of water. The salt concentration can be reduced for fur skins to allow a little more swelling, but hollow hair skins can become loose if they swell as much as fur skins, so to be safe just sticking to one pound of salt for each gallon of water is best.

The amount of acid required will depend on the acid you choose to use. No matter what acid you use, the pH needs to stay below 2.5, preferably in the 2.0 to 2.3 range. At a pH of 2.8 you can start getting loose hair and epidermis issues. Above 3.0, and especially at 3.2+, you are at a big risk of slippage. Different acids will create a different pH, but adding more acid will not lower the pH once that point is reached. What it will do is create what may be called a "reserve" to help keep the pH low as the acid is being depleted while pickling the skin. With this in mind, there is a point where adding more acid is just wasting it. You will need to find that point by trial and error, and fortunately most suppliers already have a good idea of what the optimal amount is. Whenever you try a new acid, check the pH before adding skins, then again about two hours later. If you experience a significant pH rise, for example, from 1.9 to 2.3 in a short time, you may want to remove your skins and add about 50% more acid than you did when making the pickle. Depending on your timing, you may want to leave it overnight and check the pH again the next morning. You will find that some acids hold the pH much better than others.

Another variable with the pickle holding the pH is the float ratio. Some people use a low float ratio, as low as 4:1. I prefer a pickle with a ratio of about 8:1. This ratio refers to the weight of

the water compared to the weight of the skins. For example, 8:1 is 8 pounds of water for every 1 pound of skins. That makes it simple to remember: 1 gallon of water for every pound of skin. We will do an example and show how a low float can stress acid, meaning you need to add more per gallon.

With the typical formula for formic acid of one ounce for each gallon of water let's figure five average deer capes. The rehydrated weight before shaving is going to be about six pounds each, 30 pounds total. With our 8:1 float, that calls for 30 gallons of water, which means 30 ounces of acid available to pickle the skins. If you cut that to a 4:1 float, you're down to 15 gallons of water and 15 ounces of acid, to try and pickle the same 30 pounds of skins. N ow you are trying to pickle the same weight of skins with one half the amount of acid, and it will deplete the acid at a much faster rate, causing a rise in the pH, possibly to a dangerous level. The conclusion is, if you run a lower float ratio it would be best to start with a higher acid concentration. This is where trial and error comes in.

Another issue with a pickle is crowding. Obviously, a lower float will cause more crowding making it more difficult to get the skins pickled evenly because of folds. The more skins you do in a batch the less crowding will be an issue. A single 6-pound skin in 6 gallons of water won't move as freely as 5 skins in 30 gallons of water, so you can crowd your skins a little more if you do larger batches. My advice is don't crowd your skins! The risk of unpickled folds and weak acid far outweigh the small extra cost of a bigger pickle solution.

Most skins of the size and thickness of the average deer cape will be ready to shave in 36 to 48 hours, and some as soon as 24 hours after being in the pickle, IF THEY WERE PROPERLY RE-HYDRATED! This is one of the most important reasons why every step has to be done properly for the next step to be successful. A properly re-hydrated skin will pickle faster, meaning stopping bacteria sooner, and it will shave much easier. The easier the skin is to shave, the more detail you can get on the knife and the more flexible the skin will be when mounting or softening.

#### Shaving

This is one step of the process that is impossible to teach through writing, hands-on experience is a must. Every specie is a little different, they all have certain things unique to that specie. We will touch on some basics and a few individual tricks.

The biggest piece of advice I can give anyone shaving a skin on a round knife is, worry more about a consistent thickness rather than a thin skin. Once you have the ability to shave to a smooth and consistent level the thin shaving will come naturally.

Shave all edges with the edge up. If the edge is down, you can't control the thickness and you'll end up with wide and ragged edges meaning a lot of hand trimming before mounting. An edge with a consistent thickness is what creates a smooth seam.

On all deep-rooted skins, such as bears and boars, do all of your shaving from the tail toward the nose. There are spots where you need to change direction, like the chest area of a boar and the flank area of bears, where the hair pattern changes direction, you will just need to become familiar with the patterns on these. The reason for this is you will be cutting down the shaft of the hair and



sliding off the root, basically laying the hair root down. If you shave from the nose to the tail, you will be cutting into the end of the hair root, the blade will lift it and cut the end off, resulting in hair that either pulls through the skin side or just sheds out of the skin. Summer bears from any state other than Alaska are a big problem. Once you get into October the bears in the northern states start getting a lot better to work with as they prime, but the Carolina type bears are still very deep rooted. By deep rooted I mean the fur is still growing. As the fur, or hair grows into a winter coat each fall the base of the hair is very near the inner surface of the skin, and the root is swelled as it is taking in nutrients to grow. After the growth period is complete, the bulb quits taking in nutrients and it shrinks, receding up into the skin away from the inner surface. These deep-rooted hairs are what gives an early skin a dark, or blue look. It's actually the hair itself that you see that is dark, not the fibers of the skin. Some of these early bears will be rooted so deep that all you can safely do it try and remove the membrane, and even at that you will still have hair pulling through the inside of the finished skin. If the skin is going to be mounted, the hide paste will lock these loose hairs in place for the most part.

Now, you hear people talk about shaving "to the blue". A prime skin will have fiber that can be safely removed before you get to the hair roots, which is what gives you the blue color we referred to above. You are literally thinning the skin to the point that you can see the now receded hair roots that were still at the inner surface in an un-prime skin. A "white" leather skin is what is typically called a "prime" skin. Honestly, you don't really need to shave "to the blue". Refer to the above comment about working on consistency first.

Glands on different species are something you will need to learn. The major concern you will have with North American trophies is the Pronghorn Antelope. Pronghorns have a cheek gland

that you will need to remove, or the mount will smell, especially whenever it is in humid conditions. The cheek gland will get bigger as the animal ages. The gland on an old buck pronghorn can cover the area from just below the ear to where it comes within an inch or so of joining the gland from the other cheek down under the jaw, and be well over a quarter inch thick at the heaviest part.



The glands are not visible until you cut through the inner skin, but you can feel the thicker, stiff area on the cheeks. Once you get under the inner skin in the thicker, center area of the gland, you can work from the center out toward the edge, removing the inner skin and gland material at the same time. The gland will get thinner as you go toward the edge for the most part, but will be thicker toward the jaw hinge than toward the nose. It takes some practice but you will learn how to remove the gland over time.

Mountain Goat are the other species that has a gland that is different than the typical front of the eye gland in antlered species. If you do have the chance to work on a mountain goat cape, there is a gland at the back side of each horn. On a big billy, this can be about the size of a golf ball sliced in half. Be careful when you flesh the gland material off the skin. There is a fold in the skin that goes across the gland. Don't cut that fold off. As you shave out the gland the skin will stretch out and flatten, before that it will appear to be a crease in the skin.

Javelina have a gland right over the hips, it's real noticeable and is simple to shave off, and if you do the tail area of an elk, it will have a greasy gland all around the tail, just standard shaving will remove it.

There are a variety of glands on African and exotic skins, most at the front corner of the eye or over the hip, if you get into these you will just need to keep that in mind, and remove as much as possible.

Shave the tails of all species, especially fur bearers, from the tail tip toward the base. Many species have a hair/fur that is much coarser on the tail than on the body. Skunk is about the most obvious difference, and the coarser the hair/fur, the deeper rooted it will tend to be. Even

the finer furred animals, such as red fox and raccoon, will have deeper rooted fur on the tail than on the body, so the simple answer is to just get into the habit of shaving all tails from the tip to the base. As a side note on tails, gray fox has a prominent gland on top of their tail about one third of the way from the base going toward the tail tip. Red fox and coyote have a gland there also, but it is not as prominent. All of them are easily removed during shaving.



A couple things to watch for when shaving your North American antlered game, mainly whitetail deer and elk, is the hair patterns in the brisket area and the thick areas around the top of the heads and cheeks. Pay attention to the hair directions. Shave in a way that you are laying the hair roots down and not catching under them. Elk will need some sideways to even nose to tail shaving in spots, whitetail sideways and mule deer completely reversed from what you would expect. Deer and elk skin becomes thicker as you go from the shoulders to the head area, and also from the throat to brisket area it gets thicker as you go up around to the top of the neck. The thickest area is on top of the neck from a little way behind the ears, continuing up over the head between the ears, and down the forehead almost to the eyes. The thick skin goes down between the eye and antler, around the rear area of the cheek, below the ear then behind it joining the thick skin on top of the neck. This an important area to thin, if not the thick skin will pull much harder as it dries, to the point that it will even pull skin away from your eyes.

#### **De-greasing**

This step is optional and not needed for most antlered game, but can help with gland odor on pronghorn. If you did a good job of removing the gland you should be fine, but it will help remove the oils from any gland that was not removed during shaving. Even though I say it's optional, very greasy skins like bear and boar will benefit greatly from it, especially in the odor department. Fur species benefit from de-greasing not only because of the fats in the skin itself, but also because it cleans the oils and any other foreign material, like blood, excrement, internal body fluids leaked from holes etc. from the fur. A properly de-greased fur will fluff up and groom without any extra washing after mounting.

Following the same train of thought up to this point, properly de-greasing the fibers will also aid in opening the skin more and providing better sites for the attraction of the tan. There are many de-greasers on the market, they will all work, some are solvent based, some are a surfactant/soap. Just follow the instructions with whichever product you use, but keep in mind that all de-greasers have a surfactant in them, even the solvent-based ones, and with rare exception surfactants do not work well in an acidic environment. In other words, make your de-greasing bath a separate solution, don't just add it to the pickle.

#### Tanning

The tanning step can go two basic directions, either an immersion or swab. The theory is the same for either method, you have clean fibers that will provide bonding sites for the tan.

The simplest way to express the way the tan works is it's like a magnet, opposites attract, like charges repel. In this process the charges are anionic and cationic. To keep it simple, we are just going to refer to them as positive (+) and negative (-). A raw skin is made up of both (+) and (-) fibers. Here is the importance of a proper pickling step because it changes the charge of the fibers making almost all of them the same. We'll use (+) for the skin. The mineral tanning agent is going to be the (-) charge which means it will be attracted to the skin fibers instead of repelled. The open and clean fibers, now properly charged, will give you an even and con-

sistent take up and bonding of the tan to the fibers. There are multi charged tans, mostly synthetic finish tans formulated for the leather industry, and they do work well as a back up to mineral tans since they will bond to any fibers that retained the (-) charge. Syntans are promoted as a good tan for taxidermy, making claims of no residual acids for longer shelf life. These claims are a little misleading, and any minimal shelf-life advantage is greatly offset by the problems associated with them.

Before we go on, I will say that a synthetic tan used as a backup to a mineral does serve a purpose, mostly in the leather and shearling industry, but can be useful in certain types of fur dressing. For the taxidermy industry, it only has one useful purpose, and that is with the swab or brush on tans.

Swab tans are basically a combination of fat liquors and/or swabbing oils with a multicharged synthetic tan emulsified into the mixture. The concentration of the tan is minimal in relation to the amount that would be used on a weight-based formula in an immersion tan. The oils are charged and act as a carrier to take the tan into the fibers for a hopefully even distribution. For the intended purpose of preserving a skin for a mount they work fine, and honestly are probably the best method for doing capes in shop. That being said, you can swab a properly pickled skin with fat liquor and get pretty much the same results. The pH is important on skins done with the swab tans, make sure you follow the manufacturer's instructions.

Immersion tans will fall into two category's mineral and synthetic. Let's talk about mineral tans first.

Lutan FN is the mineral tan most commonly used for the taxidermy industry, followed by aluminum sulphate. You hear a lot of bad about "alum", mostly this was started by people trying to sell a different tan, including Lutan. Well, Lutan is also an alum, just like ammonium alum and potassium alum, a couple more alums commonly used in the fur dressing industry. All of them will have some residual acids, but these are not normally the culprit when it comes to an "acid rotted" skin. Look closely at a skin that is falling apart from "acid rot", bears being the most obvious one. Where is the first place it's falling apart? It's usually the paws. The paws are areas full of fat that cannot be removed mechanically and it's thick enough that de-greasers struggle too. The raw fats left in the skin oxidize and degrade the fibers, just like they do on a raw skin that was not properly fleshed before drying. It's not the acids left from the tan that is the culprit.

Immersion tans are generally based on a percentage of drained, shaved weight. With Lutan 6% is the most commonly used formula, we will go through an example of its use. Float ratio will come into play here just like it does in the pickling process. The same 8:1 ratio works well, but if you need to crowd the skins a little more you can, just plan on more stirring or agitation.

We will use 8 capes that weigh a total of 50 pounds after being shaved and well drained. Using the 6% calculation you will need 3 pounds of Lutan. The water volume doesn't matter, the amount of tan needed per pound of skin is the same. If we do the simple 8:1 float ratio, it's

easy to figure we need 50 gallons of water. With water being 8 pounds per gallon, it's simple to do the math as 1 gallon of water per pound of skin. Since Lutan will create an acid, we need the proper amount of salt to prevent too much swelling, just as we discussed earlier, but we don't want too much salt or it will prevent the fibers from swelling enough to open up and allow the tan to penetrate deeper into the skin. This is another one of the ways that can result in a surface tan. Many formulas call for 5/8 pound of salt per gallon with Lutan, but 1/2-pound works perfectly fine. The starting and ending pH values are also very important. The attraction range for Lutan is below 3.2, preferably 3.0 or a little below, so this is the range your solution needs to be before adding skins. The Lutan alone will not bring the pH down quite to this level so you will need to add a little acid. The "neutralizing" range is 4.0 to 4.2 pH. This is where the attraction becomes a bond and the mineral basically locks onto the fibers. Once you get up to 4.5 you will notice the skin will start to get a rough or scratchy feel. If you take the pH clear up to the 5.0 range the skin will stiffen up and lose the stretch you need for mounting. This is why you do not want to neutralize a cape before putting it into the tan solution. If the skin pH is above that 5.0 range, the solution will cause the skin pH to lower, and as it reaches the bonding range it will close off the surface of the skin, preventing the inner fibers from getting exposed to the tan, again creating a surface tan.

Below is a simple Lutan formula for 50 pounds of skins, drained and shaved weight.

50 Gallons water at 90 degrees Fahrenheit

25 pounds salt

3 pounds Lutan FN

Check pH after all is dissolved, add acid to bring solution down to pH 2.8 to 3.0

Add skins, stir for 10-15 minutes, then several more times over the first hour.

Stir several times an hour for the next few hours then rest overnight.

The next morning stir the skins several times for the first hour.

Check the pH. The goal is to raise it to 4.0 with three separate feeds of sodium bicarbonate (bicarb), over a three-hour time period.

Add two ounces of bicarb, stir until it quits foaming, then several more times over the next hour.

Check the pH. If it has raised one third of the way from your starting pH to 4.0, add another two ounces of bicarb, repeat last step. If the pH is more or less than one third of the way to the finish pH, adjust the amount of bicarb up or down a little for the next feed. Keep notes every time and you will eventually find the right amount for your three feeds, making future tans simpler.

Repeat last step again and you should be in your desired 4.0 pH range.

After an hour in the solution at the ending pH range, stirring several times, remove skins and drain overnight, no skin exposed. Note, if you are not going to drum your capes, drain them for about an hour then give them a quick rinse in clear water, then hang again to drain overnight.

Next morning, swab the skins with oil, fold skin to skin, roll up overnight.

For "wet tans", the next morning drum the skins in sawdust or corn cob grit with a high grade of odorless mineral spirits or VM&P Naptha to remove oil splash and damp dry the hair. The skin is now ready to freeze or proceed to mounting. If you do not have a drum, you can just hang the skin to dry, rehydrating it for mounting at a later date.

For dry tans, hang the skin to dry, then proceed through the drumming and stretching process. There are so many variations to this process it's difficult to give anyone an exact timeline, but the basics are, dry it, tumble it, stretch it, dry it, tumble it. Some skins will benefit from an additional tumbling and stretching.

#### Conclusion

I hope this article has helped explain what it takes to properly tan a skin. What we do for taxidermy is actually a modified fur dressing process, not a tan in the true sense, as is done in the leather making process. Understanding the steps, and why one step needs to be done properly for the next step to be successful, should help you understand what methods are actually a "tan" and what methods are actually a preservation method.

There is no substitute for hands on experience. Jump in and give it a try, or use it to tweak what you do now, feel free to contact me with any questions.

Thanks,

Keith Daniels

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