



Cover image: King William of Orange tripping on a molehill. Sketch based on the equestrian statue by John Bacon Junior, St James's Square London

MOLESKIN

What Is Moleskin?

Moleskin, or mole skin, or mole fur, or simply mole, is the fur of the European Mole (*Talpa europaea*). It is unlike other fur as there is no direction to the nap, owing to the moles moving both forwards and backwards through their tunnels. The fur varies in colour but is most commonly dark grey or “taupe” (the French word for mole).

Mole leather is extremely soft and supple, and the hairs are short and dense like velvet. The skin of moles held value for early molecatchers, notable for their moleskin waistcoats and trousers which they wore to advertise their trade. Molecatchers in Britain earned a living by trapping mouldiwarpes (literally “earth throwers”) from the thirteenth century onwards. Trapping the elusive mole is a skilled and esoteric practice. By the eighteenth century, practitioners were held in such esteem that they were remunerated more generously than surgeons.

During the industrial revolution moleskin became a favoured material for the workwear of labourers who constructed Britain’s new railroads and canals, due to its velveteen texture which resists water and mud. Then, at the turn of the twentieth century, Queen Alexandra commissioned a moleskin wrap, inspiring an increased demand for mole fur which briefly turned the UK’s pest problem into a lucrative enterprise. At the peak of moleskin’s popularity, over four million pelts were imported to the USA from Britain each year.

Following World War II, new attention to animal rights and the invention of petroleum-derived fake fur alternatives made moleskin undesirable and brought on the collapse of the fur industry. Without the economic incentive of processing moles for their pelts, many pest controllers turned to strychnine poison as an efficient but less humane alternative to hand-set traps. The outlawing of strychnine in 2006 has since resulted in a resurgence in traditional mole catching practices as well as the estimated mole population. Moles are being caught across the country for the purposes of pest control, but they are no longer processed for their fur.

Today, catching moles in approved spring traps is understood to be both the most efficient and humane method of mole control. It remains the case that those who know the most about moles and their underground world are the people who engage in traditional mole catching practices. "Every molehill tells a story", writes molecatcher Jeff Nichols. "In order to fully appreciate the mole you will need to feel respect towards the velvet-coated little creature, and to understand the knowledge that has passed from mole to man".



"One of the gentlemen wearing fantastic velvet jackets that I met this morning"

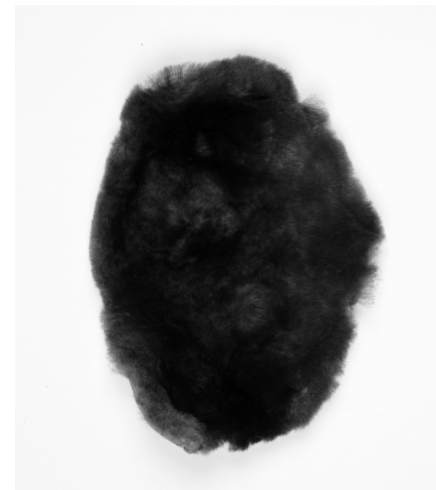
Right: Tanned mole skin, front and back

About this publication

This instructional pamphlet is the result of a collaboration between Hermione Spriggs and traditional tanner Peter Ananin. Together, we experimented with techniques and ingredients to develop a non-toxic method for processing moleskin. The moles we worked with were gifted by molecatchers based in North Yorkshire, in exchange for items made from the resulting moleskin. We worked together in Peter's micro-tannery in Glen Lyon, Scotland.

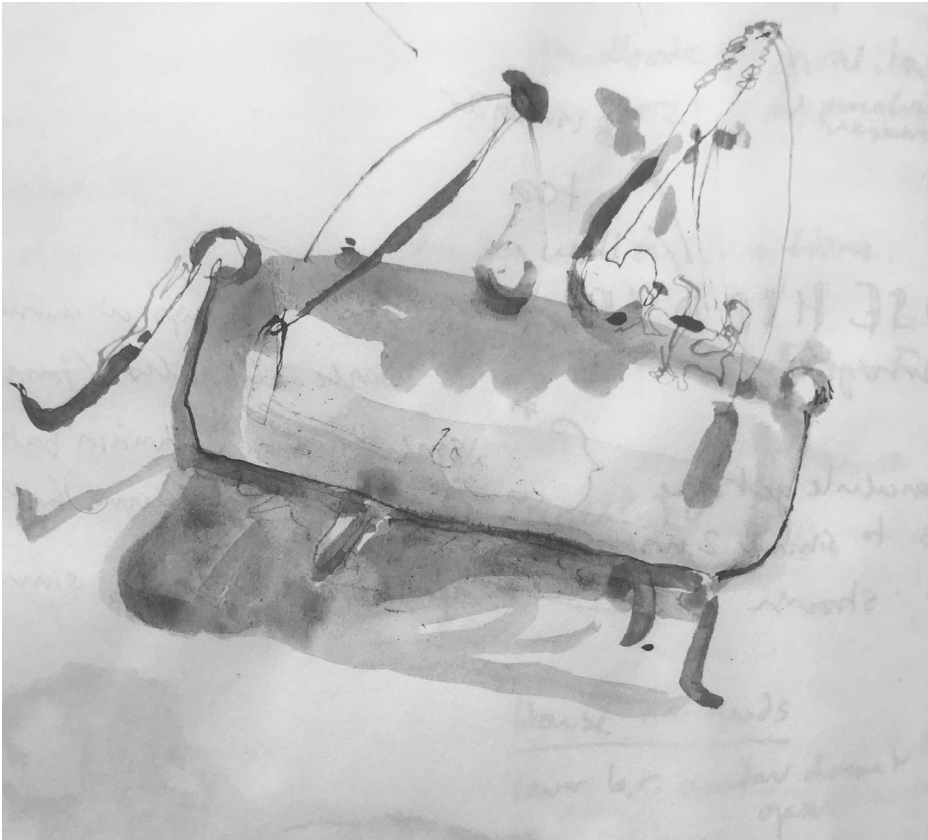
We want to emphasise that this publication is not indented to encourage killing moles for their fur. Instead, we offer the means of sustainably and ethically processing moles that are already being caught for pest control purposes.

We learned that the story of how a mole died can be read from its skin. On inspecting multiple mole pelts from various catchers, differences in how the moles were trapped and how quickly they were retrieved became apparent. Hair tends to drop out around the damaged parts of a mole's body where bacteria accumulate, revealing a legible map of how the trap interacted with the mole, and suggesting how long the mole was left underground before the trap was checked. This suggests that processing moleskin could help molecatchers to fine-tune their methods, increasing the welfare standards of their work and resulting in high-quality leather that can be made into objects of use. So long as demand continues for mole control in Britain, processing moleskin creates material value from bodies that would otherwise go to waste.



HOW TO TAN MOLESKIN

“Be gentle with the mole, like an old granny” – *Peter Ananin*



Sketch of a Duffus mole trap (author's own)

Equipment and materials:

- Stanley blades or sharp pocketknife
- Large plastic tray or other portable work surface
- Screw-lid plastic container (recipes given here suit a 20-30 litre container)
- Weighing scales
- Scraping knife/piece of slate
- Pinning board (cork placemats or cork board glued to wood works well)
- Pins (fine sewing pins or insect pins work well)
- Sandpaper (180 grit)
- Salt (sodium chloride, no additives)
- Neatsfoot oil

For the pickle:

- salt
- citric acid/ vinegar
- water
- pH paper

For the tanning:

- salt
- bark
- water

METHOD

Retrieving and preserving

- » Quickly retrieving and preserving moles is key to successful tanning. When bacteria access a body, it rapidly decays which can cause hair to slip from the pelt resulting in bald patches. To ensure the highest quality moleskin check traps frequently, skin moles on-site, and put pelts straight into a pre-prepared bucket of salt.
- » If processing on-site is impractical, an alternative is to put the mole body straight into a bucket of salt and skin the mole as soon as possible afterwards.
- » If you cannot skin the mole shortly after catching, a third option is to place the freshly caught moles in a cool bag with ice blocks, and transfer to the freezer immediately when home. If using this method, retrieving moles quickly once trapped is particularly important to avoid hair slip. Avoid freezing once salted or remove any salt before freezing, as this may stop the mole/moleskin from freezing properly.

Skinning

Moles can be skinned either freshly caught or shortly after removing from the freezer.

1. Beginning with a sharp knife (scalpel or Stanley blade works well), make a circular cut around each paw. Feel for the joint and make the incision here. Then twist each paw clockwise until you feel a 'snap' and the paw comes off.
2. Make an incision underneath the neck of the mole. Continue to cut around the neck following the bottom edge of the skull. Lay down the mole and cut all the way through the neck to separate the head from the body. Place the head and feet to one side.
3. Cut off the tail. Make an incision at the throat. Using your other hand, stretch the skin taut, allowing you to make a clean incision down to the belly. Place the fingers of one hand between the skin and flesh whilst you cut – this avoids cutting too deep and puncturing the stomach.

4. Slip your fingers under the skin and around the back of the mole and begin to carefully peel the skin away from the body, first pulling down and over the front legs, and then working around the back and down to the back legs. Do this slowly and delicately to avoid tearing the skin. Pull out the back legs and detach the skin completely.
5. Where possible use fingers and try to avoid using a knife as cut marks weaken the skin. The fewer the knife marks, the higher quality the skin will be.
6. Once the skin is fully removed, take off the small flaps of skin where the legs have been.

Fleshing

Fleshing removes excess fat and flesh that can encourage bacterial growth resulting in hair loss

- » Take any excess flesh off the pelt using your fingers, a piece of slate or blunt knife. Work on a soft surface such as your knee. This avoids putting too much pressure on the hair side of the skin which can result in hair loss.

Salting

Salting draws excess bodily fluids from the skin and prevents bacterial growth

1. Put moles hair-side down on tray or other work surface, and cover with a thick layer of salt (at least 6mm).
2. Make sure all skin is in contact with salt and stretch out any folds or pockets in the skin, as this is where bacteria thrive.
3. Leave pelts in salt for at least two days. At this stage the pelts are stable and can be preserved in salt for up to a year, provided the environment is dry with air flow. Salt should be replaced if it looks wet and/or bloody. If storing pelts in salt for a significant period of time, replace the first batch of salt after 24 hours.

Pickling

Placing pelts in a pickle prior to tanning prepares them to take up tannins, which bind to proteins in the skin during the tanning process.

1. Gently knock off excess salt from the mole pelts.
2. Place pelts into a plastic barrel containing pickle solution.

Pickle recipe:

- citric acid (85g) or similar acid such as vinegar, lemon or lime juice
- 500g salt
- 18l water

1. Use pH paper to check the acidity level, as pickle must be below pH 2.5 (between 2.5 and 2.2).
2. Leave skins in pickle for 3-5 days, stirring daily. If after the first day the pickle looks dirty, replace with fresh pickle solution.
3. Pickle may decrease in acidity over time. After 12-24 hours, measure pH of pickle. If pH is too low, add more acid. To do this, take skins out of the barrel and set to one side. Remove a small amount of pickle from the barrel and mix acid into it before adding this solution back into the barrel. Test pH and place skins back in the barrel.

To safely dispose of acidic pickling solution, add bicarbonate of soda or mix with bark to neutralise the pH before pouring away.

Bark Harvesting

Bark contains tannins which cure the moleskin. Bark can be harvested by hand from many different species of tree. Different barks vary in tannin content and create leather with particular properties (see list below, in order of tannin content).

Willow (10-12%). Very soft and flexible
Alder (9-16 %). Strong but can be brittle, warm reddish colour. Best when combined with other bark (such as willow)
Oak (8-14%). Strong and flexible
Birch (5%). Similar to willow, soft and pliable

- » Harvesting bark is best done in spring, when the sap is rising, and tannin content is highest. Bark can also be stripped from a recently felled or wind-blown tree.
- » Limit the amount of bark you take from each living tree and remove bark in vertical panels, as ringing (cutting entirely around the trunk) will cause the tree to die.
- » As an alternative to harvesting bark by hand, bark powder can be purchased online. Tea bags (e.g. English breakfast tea) contain tannin and can also be used.

To harvest bark, use a knife or bark spud. Remove the bark in strips and then break up into small pieces (around 5cm).

Tanning

To create the tanning solution, bark is boiled until the tannins are released. Cover bark with water, bring to the boil, and simmer for at least 1-2 hours. Alternatively, mix purchased bark powder with hot water. The recipe below is suitable for 50+ moles. It can be scaled up or down depending on quantity.

Recipe:

- 1kg bark
- 500g salt
- 18l water

The resulting solution should be around pH 5.

1. After it has cooled, sieve bark solution into a plastic bucket to remove pieces of bark.
2. Take mole pelts one by one out of pickle solution. Carefully squeeze out excess pickle and add each pelt to the tanning solution, making sure they are completely submerged.
3. Leave the mole pelts in the tanning solution for 4-6 days, stirring each day. Alternatively, keep the barrel in your vehicle as this will agitate the solution, curing the pelts as you drive.

Washing

Thoroughly rinse the mole pelts until water runs clear, ensuring all salt is completely removed from each mole. Gently squeeze out excess water and hang moles up to partially dry (approximately 30 minutes) before pinning.

Pinning & Drying

1. Pin pelts hair-side up onto a flat, rigid surface such as cork, Kingspan or soft wooden board. Use 8-15 pins per pelt.
2. Ensure all edges of the skins are stretched out evenly to avoid folds or pockets in the skin.
3. Place pinned moles close to a heat source or dehumidifier. Avoid too much direct heat (“too hot for your hand is too hot for a hide”)
4. A fan will speed up the drying process. If available heat is limited, use a hairdryer to initially dry the fur then leave until completely dry. Conditions should be such that skins dry within 2-3 days, to avoid mould developing.

Once dry, the skins are stable and can be stored in a warm, dry environment until ready for the next stage, softening.

Softening / Sanding

Use 180 grit sandpaper to gently rub away any stiff corners and to thin down other irregular spots on the skin. Avoid sanding too much as this will weaken the skin. Use your hands to roll and massage the skin until it softens.

Stitching

The skins can be sewn by hand or by machine like other leather.

- » Cut leather flesh-side up using a cutting board and Stanley knife (this avoids micro cuts in the skin, which result in tearing).
- » Upholstery thread works well for sewing moles.



A moleskin glasses case, with fur on the inside and black silk outer



Using a spud to harvest birch bark for the tanning solution



Bark is broken down into small pieces prior to boiling in water for several hours



Above: hat made from moleskin
 Right: excerpt from *The Mole Catcher* by John Clare (1793-1864)

*Een he from fames proud lottery owns a prize
 A sort of walking almanack he seems
 The rustic swains who deem him weather wise
 Shepherd & woodman his discourse esteems
 & ploughmen often stop their reeking teams.*

~

*With spud & traps & horsehair strings supplied
 & potter out to seek each fresh made hill
 Pricking the greensward where they love to hide
 He sets his treacherous snares resolved to kill
 & on the willow sticks bent to the grass
 That such as touched jerks up in bouncing springs
 Soon as the little hermit tries to pass
 His little carcass on the gibbet hings.*

~

*& as a triumph to his matchless skill
 On some grey willow where a road runs bye
 That passers may behold his powers to kill
 On the boughs twigs he'll many a felon tye
 On every common dozens may be met
 Dangling on bent twigs bleaching to the sun
 Whose melancholly fates meets no regret
 Though dreamless of the snare they could not shun
 They died unconscious of all injury done.*

A TOAST TO THE LITTLE GENTLEMAN IN BLACK VELVET

John Clare's poem "The Mole Catcher", written in the early nineteenth century, portrays a man who engages with the land through a full range of common rights. This enables his vast knowledge of local ecology and – consulted by villagers, shepherds, woodsmen and ploughmen – lends him the reputation of a "walking almanack."

In 1884 James Purves wrote that the molecatcher's eyes "are always among his feet," and "wherever the marks of his knees have been the land prospers and grows green in spring." Traditional molecatchers maintain a similar level of land-based wisdom today. Moles are known as powerful and intelligent animals that are hard to outwit, with physical strength that appears disproportionate to their small size. Perhaps for these reasons, moles have long been preserved and used in folk medicine. Until the early 1900s it was common practice to carry a dried mole's paw amulet on one's person, to ward off arthritis and increase bodily strength. Moles work hard tunnelling through the earth, and their strong fleshy paws resemble out-sized human hands, perhaps accounting for their use in sympathetic magic.

The collective noun for moles is a "labour," underscoring their ceaseless digging activity and connecting the persistent earthwork of moles with a human project of reclaiming common rights to the land and its riches. "Well burrowed, old mole!" declared Marx, locating a revolutionary potential in the mole's underground tunnelling activities.

Moles – like other creatures that we define as "pests" – show little regard for human boundary lines, and even repurpose human structures for their own beneficial use. For instance, moles often inhabit the space under barbed wire fences because they collect drops of water which soften the soil underneath, attracting worms and making the earth easier to dig. Like the moles that they follow, molecatchers make a living and assert their right to roam by exploiting the fences and boundaries that define private property in Britain. Both parties glean their livelihood from hedgerows and other marginal spaces, the mole hunting worms, and the mole hunter in pursuit of the mole.

Tracking moles involves an intimate practice of "probing" the earth, using tools and techniques which mimic the mole's own mode of sensing its environment. This leads the molecatcher into the world of the mole, first by tuning into sound and vibration, then by imagining what the mole might be experiencing and thinking, and finally by adopting the mole's perspective underground. Moles respond and learn from humans as we do from them, observing and

exploiting our structures and behaviours for their own benefit. This creates an ongoing battle of wits between molecatcher and mole, united in what Gregory Bateson describes as a "survival unit" – a coupling of species that may include predation but ultimately works in the service of ecological flourishing. It is, after all, in the best interests of the molecatcher to ensure that a healthy population of moles return to be caught the following season.

The adversary of anyone trying to control nature—particularly those committed to a perfectly mowed lawn—moles serve as allies for individuals resisting colonial forces and capitalist expansion. For instance, Lakota people acknowledge the mole's hard work collecting medicines from the roots of plants underfoot, and during his campaign against the US military invasion the Indigenous leader Crazy Horse collected fresh dirt from mole mounds which he knew to contain medicinal substances, washing his body with the earth to protect himself.

In 1702, King William of England, better known as William of Orange, died at Kensington Palace after the horse he was riding tripped over a molehill. Fighting for their rights as rural land-workers, William's Jacobite enemies in Scotland claimed the mole as their accomplice, raising a toast to "the little gentleman in black velvet." This "little gentleman" could equally refer to the mole, to the molecatcher wearing his moleskin waistcoat, or to the strange alliance between these two characters.

In the words of Jeff Nichols, "A mole-catcher will never be a rich man, but he will be rich in the knowledge that the mole brings you. When I see a molehill, it isn't just a pile of earth, it's a key to a strange little world."

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"A°A"

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All images are the authors' own, with the exception of the photograph on p4, courtesy of Nigel Stock. Above: Mole paw amulet.

