

Prehistoric Leather and Tanning Methods

Whether it is a domestic farm animal or an animal caught in a hunt, when it is processed, meat for food, is only one of the valuable resources it provides. The skin in particular can be used for any number of applications, from clothing and shoes to roofs for simple dwellings, or even as a strong rope.

To skin an animal effectively, sharp tools are needed to remove the hide from the carcass. Once a raw hide is obtained, flint scrapers were used to remove bits of flesh and fat from the inner surface of the hide. We have examples of both flint blades that were used to separate the skin from flesh beneath, and also of scrapers used to prepare the hide.



A hide, pegged to a frame in order to dry (wikimedia commons)

In its raw state, the hide would rapidly decay, so has to be stabilised if it is to be of use. Tanning chemically and mechanically stabilizes the fibrous hide structure. Only after being tanned may a hide be referred to as leather, a wholly superior and more durable form of material. In prehistoric times, forms of pseudo-tanning existed which mimicked the effects of true tanning methods. Skins could be stretched on frames and dried in the sun to dehydrate them, temporarily stabilizing them. However, these skins would be brittle and would rot if exposed to water. In an attempt to soften the hide, fats and oils could be rubbed into the hide. Egg yolks, animal brain, and natural fat were all used to provide a protective insulating layer to the hide fibres. This restored pliability and prevented water from saturating the hide. Due to the natural drying of these oils, they needed to be replaced frequently to preserve the untanned hide. Hides could also be preserved with the smoke from wood burning fires. This controlled drying imparted tannins into the hide, the chemical that defined vegetable tanning methods used in later ages.



A flint scraper, of the kind that was used to clean a hide (BRP)

True tanning, in contrast, is a permanent chemical restructuring of the hide. Vegetable tanning is a process where tannins are imparted into the hide. These tannins are found naturally in many types of vegetations, though found in especially high concentrations in tree bark. By steeping tannin rich vegetation, a tanning solution could be produced. Raw hides were then to soaked in tanning pits for month or years in some cases. During his time, tannins bond to the collagen fibres. The hide is chemically stabilized by this process, prolonging its life and protecting it from decay. The hide may now be referred to as leather, suitable for applications requiring great strength, abrasion resistance, and durability.

Written by Sam Levin 29/6/14