



CCI Notes

8/4

Care of Rawhide and Semi-Tanned Leather

Introduction

Museum collections of Indian and Inuit artifacts frequently contain items made of rawhide or semi-tanned leather. During use, these hide goods often became dirty and worn; age and disuse subsequently rob them of their flexibility. Despite these problems, such objects can be preserved in a reasonable state with regular care.

Rawhide

Rawhide, as the name implies, is simply the skin of an animal which has had all the flesh removed and has been allowed to dry. Often, all the hair has been removed as well. It is usually a very rigid, tough material. Typical artifacts of rawhide are drum heads, parfleches, and shields. Due to its inherent toughness, rawhide found in museum collections is frequently in good condition.

Semi-Tanned Leather

Semi-tanned leather is commonly referred to as "buckskin". It is manufactured by a variety of methods, but the usual method is as follows. All the flesh is removed from the skin. The skin is then stretched and an oil and fat emulsion, usually from the brain of the animal, is rubbed into it.

The skin is then manipulated or "staked" until it is dry, soft, and flexible. Often, it is then smoked, which produces an amber brown colour and a characteristic smell. Some leather is commercially tanned to resemble buckskin; it is characterized by an overall uniformity of finish in the nap or raised areas, and usually lacks any trace of a smoky smell.

When new, semi-tanned leather usually has a soft suede-like nap, is extremely flexible, and often has a full plumpness unlike any other kind of leather. Examples of artifacts frequently made of this type of leather include jackets and coats, pouches, moccasins, and leggings. Being only semi-tanned, it has limited resistance to water, and as a result artifacts are frequently found in a variety of conditions ranging from "nearly new" hide to a stiff, deformed, greyish-brown leather that has lost its flexibility and plumpness.

Relative Humidity and Temperature

Change in the relative humidity (RH) level is the major cause of problems with both rawhide and semi-tanned leather. Considerable change in the dimensions of a piece of leather will occur as it absorbs or releases water

to the air. This natural process is a particularly serious problem in objects, such as drums or kayaks, where the movement of the hide is restrained by a framework – either the hide will split or the framework will break as the conditions become dry. To prevent both of these possibilities, a stable RH, ideally between 45% and 55%, should be maintained. Keeping the leather from becoming damp will prevent mould growth; mould grows best when the RH rises above about 65%. Temperatures below 25°C are preferable. Careful attention should be paid to localized heating due to bright display spotlights, which can cause damage due to desiccation.

Illumination

These types of leather are moderately sensitive to light. Consequently, an upper limit of 150 lux with a maximum ultraviolet content of 75 µW/lm is acceptable for display or storage. Information concerning the measurement of environmental conditions is given in CCI Notes 2/4, *CCI Environmental Monitoring Equipment*, and CCI Notes 2/5, *Using a Camera to Measure Light Levels*.

Handling

The most important aspect of handling rawhide or semi-tanned leather is adequate support, particularly for objects that have lost their flexibility. Take special precautions when handling long, thin pieces of hide, such as lashings or whips. Although hard and tough, thin sections of leather can be quite brittle and can easily crack if bent too far. Some rawhide objects, such as parfleches and sealskin floats, are found in museum collections in a folded or flattened condition. If they are stiff, no attempt should be made to return them to their original shape, as this can cause irreparable damage. A professional conservator should be consulted for advice on such objects.

Storage

If possible, artifacts of semi-tanned leather should be stored flat on shelves, with any creases or sharp angles padded out with unbuffered, acid-free (neutral pH) tissue paper. However, artifacts such as robes and jackets frequently must be hung. If this is necessary, be sure the hangers are well padded; cotton or polyester quilting material covered with unbleached cotton is very useful for this purpose. Wire hangers should not be used because they provide inadequate support and are susceptible to corrosion. Check that the weight of the garment itself or of its applied decoration is not likely to cause tears or stretching over the years – if this appears probable, store the object horizontally (see CCI Notes 13/2, *Flat Storage for Textiles*, and CCI Notes 13/5, *Hanging Storage for Costumes*).

Like any form of leather, these artifacts are subject to mould and insect attack. Make sure that they are not stored in damp or humid areas, and that there is a reasonable amount of air circulation. Most important, however, is to examine the artifacts at least twice a year, more frequently if possible, for signs of attack or deterioration. More information about biological infestation can be obtained from CCI Notes 3/1, *Examining for Insect Infestation*.

Cleaning

Often, rawhide and semi-tanned leather artifacts are very dirty, and cleaning can improve their appearance. These kinds of artifacts can be cleaned very effectively by first brushing with a medium-soft brush towards a gauze-covered vacuum cleaner nozzle. Before cleaning, check that there is no loose or powdery surface decoration. More stubborn ground-in dirt can often be removed by rubbing with powdered eraser material such as Dandy Rub[®], Skum-X[®], or even warm cornmeal. Great care should be taken to brush off all the

remaining eraser powder or cornmeal after use. Stubborn spots and stains, which powdered eraser cannot remove, should be left. Attempting to remove these spots and stains with a cleaning solution such as soap and water will only cause the stain to spread and stiffen, and will mat the wet area.

Deterioration

No attempt should be made to reform or soften stiff, deformed objects of either rawhide or semi-tanned leather, as this can lead to irreversible damage. In particular, leather dressings should never be used on semi-tanned material, as they were designed for use with commercially produced leather products and can ruin semi-tanned goods completely.

Splits in stretched hide objects should not be repaired without consulting a conservator. The split allows the object to move in response to changing RH; repair or restraint will only cause additional damage if the RH continues to fluctuate. No attempt should be made to try to bring the edges of a split back together or to back the torn area with another type of material. For advice on severely damaged or dirty hide artifacts, please contact the Ethnology Laboratory at the Canadian Conservation Institute.

Suppliers

Powdered eraser material (Dandy Rub[®] and Skum-X[®]):

drafting supply stores, office supply stores

Unbuffered, acid-free (neutral pH) tissue paper:

suppliers of conservation products and archival materials, for example,

Bibliofiche
9620, route Transcanadienne
Montréal, Québec
H4S 1V9
Tel.: (514) 336-4340

or

Carr McLean
461 Horner Avenue
Toronto, Ontario
M8W 4X2
Tel.: (416) 252-3371

Cotton quilting material and unbleached cotton:

fabric stores; department stores;
craft stores

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Copies are also available in French.

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