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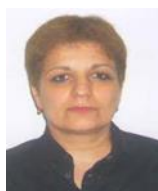
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Article



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TRADITIONAL PROCESSING AND USE OF NATURAL LEATHER IN THE ADJARA REGION

Abstract: The article examines the main directions of traditional processing and use of natural leather in the Adjara region. The study is based on written sources, ethnographic descriptions, and artifacts preserved in the museums of Batumi, Kobuleti, and Batumi. It describes traditional methods of leather acquisition and tanning, the types of raw materials used, and their applications in the production of footwear, household items, equestrian equipment, and musical instruments.

Special attention is given to the organoleptic assessment of the natural leather properties of museum artifacts, which revealed degradation processes caused by the passage of time. The research confirms that leather products in Adjara served not only practical purposes but also possessed significant cultural and ethnographic value.

Key words: Natural leather; Adjara; traditional craftsmanship; leather processing; folk footwear; ethnography; museum artifacts; organoleptic assessment.

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Introduction

Leather is one of the oldest and most multifunctional materials used by humankind, having acquired practical, social, and cultural significance across different historical epochs. Despite technological progress and the widespread use of

synthetic materials, **natural leather** continues to occupy a distinctive position in both traditional and contemporary production. Its **physical and mechanical properties** - notably durability, elasticity, pliability, and adaptability—have determined its extensive application in the

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manufacture of footwear, clothing, household items, equestrian equipment, and musical instruments.

In Georgia, **leather processing** developed as one of the most important traditional crafts from ancient times. Depending on natural conditions, climate, and lifestyle, it assumed diverse regional forms. In this regard, the Adjara region is of particular interest due to its humid climate, long-standing livestock-breeding traditions, and self-sufficient household economy, all of which fostered the local production and diversified use of leather materials.

The aim of the present study is to examine the **traditional processing and use of natural leather** in the Adjara region based on ethnographic sources and museum artifacts, as well as to assess the properties of leather materials using **organoleptic assessment**.

Leather is widely regarded as one of the most versatile materials employed in the manufacture of footwear and related products. The tradition of its use has withstood the most demanding test—time. Although centuries, historical eras, fashion trends, and climatic conditions have changed, leather products, particularly footwear, have remained indispensable, continuously adapting to human needs in different periods.

Researchers have not yet reached a definitive conclusion regarding the origin of the first leather footwear. However, the earliest known examples date to the Upper Paleolithic period (<https://historyofinformation.com/detail.php?entryid=3199>). Archaeological findings include a moccasin-like shoe made of cowhide discovered in Armenia and dated to at least 10 000 years ago. From approximately 6000 to 2500 BCE, leather was also widely used by the Assyrians. This tendency persisted across civilizations and historical epochs (Grdzeldze, 2025). It was only by the Baroque period that leather footwear acquired not only practical but also fashionable significance. With the development of civilizations, the leather footwear industry expanded, largely due to the availability of raw materials.

Leather Processing Traditions in Georgia

Leather processing in Georgia represents one of the country's oldest and most significant crafts. It was widely employed in everyday life as well as in agricultural, military, and trade activities. Particularly in the 18th–19th centuries, leatherworking occupied a prominent place in daily life. Natural conditions, climate, and lifestyle contributed to the regional diversity of leather-processing techniques and products (Nanobashvili, 1973).

Traditional Georgian leather products and folk footwear are characterized by considerable diversity

and regional variation. Well-known types include boots, *kapuchi*, *kaloshi*, *fatsa*, heeled boots, and especially *kachabi* (*kachachebi*), which were common in mountainous regions. These were often made of pigskin and distinguished by rich decorative elements and, in some cases, special buttons. Such features provided both aesthetic value and functional suitability for use in complex mountainous terrain.

The present study focuses specifically on the Adjara region.

Leather Production and Use in Adjara

Historically, Adjara was distinguished by rich agricultural and craft traditions. The mountainous landscape, humid climate, widespread livestock breeding, and self-sufficient household economy promoted the extensive use of leather in everyday life. Leather products in Adjara fulfilled not only practical functions but also conveyed information about social status, age, and occupation.

Leather production in Adjara relied primarily on **local raw materials** obtained from livestock slaughtered within household economies, rendering the craft both natural and economically accessible. The principal types of hides used included:

- **Cattle hide (cowhide, oxhide)** – characterized by substantial thickness and strength; used for footwear, belts, harnesses, and other load-bearing items;
- **Sheepskin** – soft and warm; frequently used with the fleece intact for winter clothing;
- **Goatskin** – thin, flexible, and durable; employed in the production of bags, wallets, and small accessories.

Ivane Javakhishvili provides valuable ethnographic descriptions of traditional footwear and clothing in his historical works (Javakhishvili, 1962; 1983). He documents the widespread use of leather items such as *kalabani*, *mest*, *zankali*, and related forms, emphasizing their constructional features and regional variations.

Traditional Footwear: Kalabani

Kalabani (traditional leather footwear) (Fig. 1) was produced from cattle, cow, or horse hide. After skinning, the hide was cleaned of residual flesh and fat, dried, cut to predetermined dimensions, soaked, perforated, and stitched using leather thongs (*bizi*). Variants included ankle-high and front-stitched forms, as well as the so-called *kolotura* type. Women were also actively involved in sewing and wearing *kalabani*. The Adjara variant was distinguished by additional stitching at the heel and along the upper edge (Javakhishvili, 1983).

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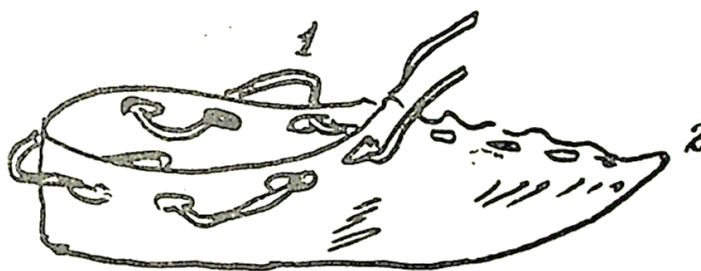


Fig. 1. Kalabani. 1 – Kopi, 2 – Chvinti.

Museum Research and Leather Processing Techniques

Within the framework of this study, artifacts preserved in the Batumi State Museum named after Khariton Akhvlediani, the Batumi Ethnographic Museum “Borjalo,” and the Kobuleti Museum were examined.

Leather processing in Adjara was based on **traditional natural methods**. After skinning, hides were cleaned to remove fat and flesh residues, then salted or air-dried to prevent putrefaction. One of the most important stages of hide processing was **tanning**, which in Adjara was carried out predominantly by **vegetable tanning** methods.

Infusions prepared from oak bark, beech bark, and other forest plants were used as tanning agents. The tanning process was prolonged and required considerable practical experience. To impart elasticity and pliability, leather was treated with fish oil and animal brain.

Footwear constituted one of the most important categories of leather products in Adjara. *Kalabani* (Fig. 2) and boots provided protection against moisture and cold and were typically hand-stitched using coarse thread or leather strips. Thick leather was used for soles, whereas comparatively softer leather was applied to the upper components.



Fig. 2. Kalamani (Kobuleti Museum).

Leather in Musical Instruments

Leather also played an essential role in the manufacture of musical instruments in Adjara. A notable example is *chiboni* (traditional Georgian bagpipe) (Fig. 3), one of the regional variants of the bagpipe tradition.

Chiboni consists of two principal components: the bag and the pipes. The bag was made from

goatskin, sheepskin, calfskin, or lambskin, thoroughly cleaned of hair. Goat skin was most frequently used because it is stronger than sheepskin and produces a clearer sound. In percussion instruments such as drums and frame drums, goatskin membranes were stretched over wooden frames. In stringed instruments, strings were produced from sheep or goat intestines (Fig. 4).

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Fig. 3. Chibon. (a – Batumi Ethnographic Museum “Borjghalo”; b – Kobuleti Museum).



Fig. 4. Musical instruments kept in the museums of Adjara (Batumi, Khariton Akhvlediani Museum).

Leather in Equestrian and Household Equipment

In the Adjara region, natural leather was also widely used in the manufacture of agricultural and

equestrian equipment, including saddle components, bridles, reins, and straps. These items required high tensile strength and durability and were therefore predominantly produced from cattle hide (Fig. 5).

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Fig. 5. Saddle (Batumi Ethnographic Museum “Borjghalo”).

Organoleptic Assessment of Museum Artifacts

An **organoleptic assessment of leather properties** was conducted on selected museum artifacts, including **visual inspection**, **tactile assessment**, and **olfactory assessment**. The following characteristics were identified:

- **Durability:** Natural leather exhibits high strength and long-term serviceability, retaining its form during extended use;
- **Visual inspection:** Uneven surfaces, visible pores, wrinkles, cracks, surface abrasion, uneven pigmentation, localized darkening, small perforations, traces of mold, and salt crystallization were observed;
- **Tactile assessment:** Although leather is inherently elastic and pliable, the examined samples demonstrated increased rigidity and a **loss of elasticity and pliability**, indicating age-related deterioration;
- **Aesthetic properties:** Discoloration, fading, and surface degradation were evident, reflecting long-term environmental exposure;
- **Olfactory assessment:** Instead of the characteristic mild odor of natural leather, a **foreign chemical odor atypical for natural leather** was detected in some artifacts.

All observed alterations represent manifestations of **time-induced degradation**. Aging processes affect leather through physicochemical and biological

mechanisms, including deterioration of the collagen fiber structure, moisture loss, embrittlement, cracking, deformation caused by humidity fluctuations, and damage resulting from microorganisms and insects.

Conclusion

The findings demonstrate that leather products in the Adjara region constituted an integral component of traditional folk culture and were closely associated with everyday life, agriculture, equestrian practices, and military needs. Their characterization and study are therefore of particular scholarly importance.

The results confirm that traditional leather processing and the use of leather materials in Adjara formed a significant part of regional folk craftsmanship. The organoleptic assessment of museum artifacts reveals that **age-related physicochemical and biological degradation processes** develop in leather materials over time, which underscores the necessity of **systematic research, conservation, and preventive preservation**.

This study contributes to the systematization of historical experience related to traditional leather processing in the Adjara region and provides a solid foundation for further interdisciplinary research.

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