Discover...

IVORY, BONE, ANTLER & HORN

Materials

All over the world humans have carved, reshaped, and modified bones, teeth, antlers, and horns into a variety of ingenious artefacts. An extensive but by no means exhaustive range of these uses may be seen in the collections of the Pitt Rivers Museum. Objects made from these natural resources are often as practical and functional as they are aesthetic or decorative. The size and form of such artefacts are pre-determined by the dimensions of the original raw material and, when the natural size and shape has largely been maintained, identification of that raw material is very easy. Although at first sight ivory, bone, antler, and horn might appear difficult to distinguish their intrinsic qualities vary.

▲ **Whaler's scrimshaw, Oceania/Europe; 1936.26.31**

Ivory

Strictly speaking, the word ivory only applies to elephant tusks. However, it is generally used more widely to describe the dentine materials of other animals as well, including the sperm whale and the walrus. Objects made from sperm whale teeth include scrimshaws, as carved by European whalers, and necklaces, as used in Fiji to strengthen social relations.

▲ **Sawn whale tooth necklace, Fiji; 1940.10.54**

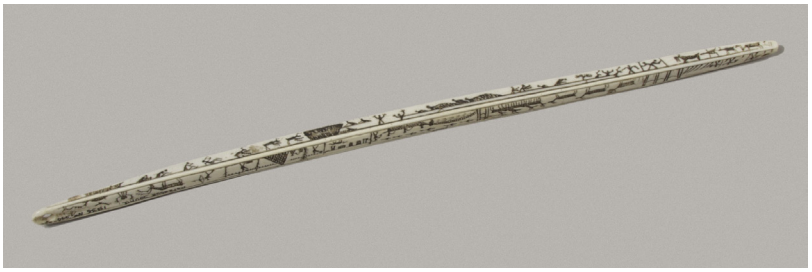
A high market value has long been ascribed to all ivory, in particular to the massive tusks of the African elephant. This worth may be attributed not only to the properties of hardness and colour but also to its relative scarceness. In Africa, the value placed on this raw material has resulted in an exploitative export market that contrasts enormously with the subsistence patterns of indigenous peoples.

As a consequence of these factors later African ivory work has tended to be decorative or religious rather than purely practical and functional. An ivory wrist guard, as used by a Khoisan hunter in South Africa, provides an earlier and morepractical example of ivory use.

▲ **Khoisan archery wrist-guard, South Africa; 2003.5.1**

▲ **Thule harpoon head, Cumberland Sound, Baffin island, Canada; 1900.65.9**

For Inuit peoples living along the Bering Straits in Arctic Alaska, however, walrus tusks were more readily available than wood. Early practical objects, such as a harpoon head made by the prehistoric Inuit people, the Thule, highlight the long history of using Ivory in this way. Initially the best and biggest tusks were chosen for tools and decorative carvings and the rest discarded. Later though, when walrus ivory became a desirable trading item, the best tusks were sold on and inferior material was used to make these everyday artefacts. A bow of walrus ivory highlights how the practical and decorative were often combined. This object once formed part of a composite bow-drill and has been decorated with fine etchings of both hunting and domestic scenes.



◀ **Inuit bow drill of walrus tusk, Kotzebue Sound, Alaska, USA; 1886.1.693**

Ivory is valued and appreciated for its structural properties. The layers of dentine within the tusk form a wavy, interlacing pattern (or ‘grain’). This offers different surface effects and also gives ivory its strength, making it suitable for long-lasting, detailed carving. An oily substance within the pattern’s cavities helps reduce brittleness and give a smooth finish that can be enhanced with polishing to reveal a range of colours from bright white through to shades of yellow-brown. Indian elephant ivory is generally whiter and softer than African ivory.

In China master craftsmen may have used this process to ease the manufacture of the multi-layered ‘puzzle’ balls, where each ball is a detached layer carved within another, and which together represent principals of Chinese philosophy.

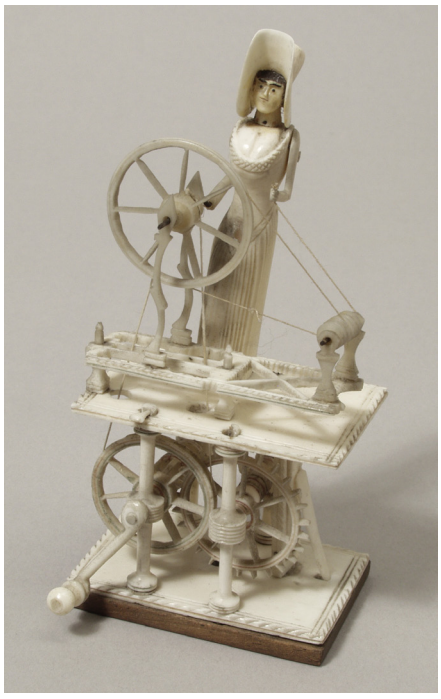
The Northwest Coast Style drumstick-head is an excellent example of how the individual characteristics of one piece of ivory have been used to show off the skills and traditions of the Haida people of North America.

▲ **Carved ivory *chi* ball, China; 1886.1.93**

◀ **Haida drumstick, Canada; 1884.58.5**

Bone

Bone refers to the hard parts of any vertebrate skeleton. Unlike ivory, which is protected by a smooth enamel layer, the surface of bone naturally appears rather grainy and coarse. An enormous variety of different bones have been used for the manufacture of a similarly large number of different object types. Even for the expert, identifying the animal bones is not always straightforward.



The processing of animal bones is common to cultures all around the globe but there is a tendency towards using the bones of animals that are commonly eaten or that exist locally. For example, French prisoners held in England during the Napoleonic Wars passed their time by carving toys and other items out of bones they found in their meals. Similarly the Tiv of Nigeria used the backbones of snakes from their local environment to make objects such as belts and divining sets; the bones are cast on the ground to divine the answers to particular questions.

◀ **French POW toy, England; 1945.2.3**

◀ **Tiv belt or waist ornament of bone, Nigeria; 1904.54.35**

Buddhist trumpet of human femur, Southern Tibet; 1927.10.39 ▼

In some cultures human bones are sometimes incorporated into everyday objects. While this use of human bones may seem unusual or even taboo to people of many cultures, to Tibetan Buddhists it is normal. Objects they might use include drinking vessels made out of human crania (skulls) and trumpets made from human femurs (thigh bones). Such objects tended to have spiritual importance for those who made and used them and helped signify the ephemeral nature of human life.

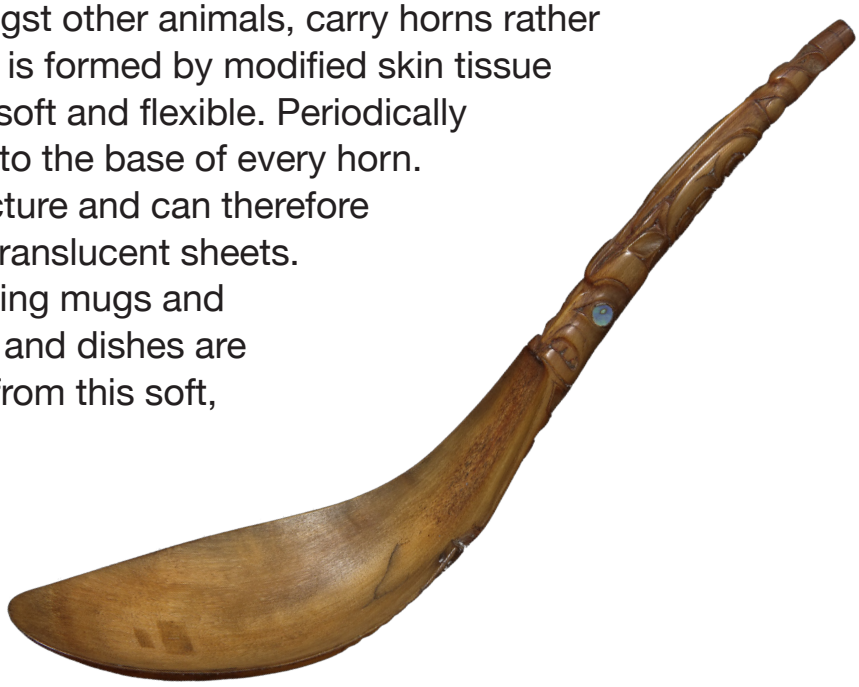
Bone may often be used in decorative ways as well as an objects of spiritual importance. This Inuit needle case is an everyday object that has been made more aesthetically pleasing by the addition of finely carved bone pendants. As the pendants may also have spiritual meanings this is an example of an object that is not only meaningful but practical and aesthetically pleasing at the same time.

◀ **Inuit bone and sealskin needle case, Icy Cape, Alaska, USA; 1884.68.23**

Horn and Antler

Antlers are outgrowths of bone that are carried by most members of the deer-family and are shed annually. According to the species antlers vary extensively in size and shape. For example, those of roe deer are relatively small, straight, and slender while elk can grow shovel-like antlers capable of spanning up to 120 centimetres. As with ivory, soaking antlers in water can soften an ordinarily tough material and make carving them much easier. The toughness of antler makes it ideal for making the handles to knives and other tools. It is less frequently used than horn for decorative work.

Cows, goats, and sheep, amongst other animals, carry horns rather than antlers. Unlike antler, horn is formed by modified skin tissue and is therefore naturally quite soft and flexible. Periodically new layers of tissue are added to the base of every horn. The material has a fibrous structure and can therefore be broken down into very thin translucent sheets. Everyday objects such as drinking mugs and vessels, flasks, spoons, bowls, and dishes are all easily made and decorated from this soft, fine material.



Carved spoon made from mountain sheep horn, Haida, Haida Gwaii, NW Canada; 1884.5.13 ▶

Further Reading

Hodges, Henry, *Artifacts: An Introduction to Early Materials and Technology*, London: Duckworth (1989).

Macgregor, Arthur, *Bone, Antler, Ivory, and Horn: The Technology of Skeletal Materials since the Roman Period*, London: Barnes and Noble (1985).

Ross, Doran H., *Elephant: The Animal and its Ivory in African Culture*, Los Angeles: Fowler Museum of Cultural History (1992).

The objects featured in this Introductory guide can be found at the following locations:

Court (ground floor)

Cases 111A and B – Objects Made from Ivory and Bone.

Cases 70A, B and C – Objects Made from Ivory, Bone and Horn.

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