Catalogue of the exhibition From the Colossal to the Microsopic

Showcase 1: Before the Ice Ages

In the Pliocene, before the beginning of the climatic fluctuations characterized by periodic ice advances in the middle latitudes around 2.6 million years ago, parts of Europe and western Asia were occupied by forests. At this time our ancestors had not left Africa and the woodlands were left unaltered by anthropogenic activity.

The specimen displayed is a leaf impression of *Quercus macranthera* (Caucasian oak) from a diatomite deposited in a lake during the Pliocene. It was sampled from a site in southern Armenia.

Mike Field

Showcase 2: A Pleistocene interglaciation

Wood and a stone handaxe is displayed from the Middle Pleistocene interglacial site at Happisburgh, Norfolk, UK. The fluvial channel that yielded these remains is occasionally exposed after storm activity on the beach.

A multidisciplinary investigation of the sediments revealed that hominins were knapping on the edge of a channel that flowed into a nearby estuary. Cones of pine (*Pinus*) and spruce (*Picea*) were recovered and suggest that coniferous forest predominated at the time of sediment deposition.

Mike Field

Showcase 3: Horse bone hammers

Flint was often used by humans/hominins in the past to make tools, but tools made with other raw materials such as bones and wood are rare in the archaeological record.

At the Middle Pleistocene site of Schöningen (Germany) both wood - the famous spears - and bone tools have been retrieved. The bone tools were unveiled after archaeozoologists noticed a peculiar fragmentation pattern in some horse bones that suggested their use as hammers to smash other bones to access the nutritive marrow within. Experiments on this practice with similar bones have resulted in identical patterns indicating that these bones were frequently used as tools.

Laura Llorente Rodríguez
Thijs van Kolfschoten

Showcase 4: Woolly mammoth

During the glacial periods of the Pleistocene or Ice Age, humans/hominins encountered faunas that are adapted to cold environments including species such as the Woolly Mammoth (*Mammuthus primigenius*).

This 4 to 6 tons animal went extinct during the early Holocene; it is symbolic for the extinction of other megafauna species during the end of the Pleistocene. Researchers have long debated to what extent humans caused this megafauna extinction event, exploring other possibilities such as the climatic change to warmer conditions characteristic of the Holocene and its effect on these animal's habitat and biology.

Laura Llorente Rodríguez
Thijs van Kolfschoten

Showcase 5: Origins of marine fishing in Europe

Marine coastal resources played an important role in the subsistence at the Late Pleistocene of both Neanderthals and modern humans. Marine molluscs and fish bones retrieved at the Iberian Peninsula are the oldest evidence of marine fishing and shellfishing in Europe and the second of the world. Mussels, cod, haddock or seabreams were common on the menu of our ancestors.

Laura Llorente Rodríguez

Showcase 6: Early Bronze Age devastation in central Italy

Mount Vesuvius has a history of erupting and displacing local populations. In the early Bronze Age the Avellino eruption caused communities located proximal to the volcano the abandon their homes and flee. Nola is an early Bronze Age village that was submerged under the ash that was emitted from the volcano during the Avellino eruption.

An NWO funded project has been investigating where these people may have fled. A multidisciplinary study in the Agro Pontino, southern Lazio has established that it is probable that refugees did not reach this area in any great number. Displayed is the Avellino ash (tephra) from this distal location.

Mike Field

Showcase 7: Cutting Edge: The Technology and Social Impact of Metallurgy

By the end of the fourth millennium and the beginning of the third millennium BC, the practice of metallurgy was spread all across Europe. However, it is only by the second millennium, when copper was methodically mixed with tin to obtain bronze, that metal objects reached systematic distribution, radically impacting European societies.

Tin and Copper rarely occur in the same region, this pushed communities to expand their trade networks and connect with distant groups in order to exchange raw materials. However, metalwork popularity was also due to the unprecedented possibility to re-melt worn-out or unwanted objects and cast them into new ones, originating one of the first examples of a large-scale recycling economy of the past.

The advent of metallurgy was not just a technological improvement. Together with the appearance of new knowledge and new objects, also prominent social roles acquire new visibility, such as the smith or the warrior. Furthermore, instead of being recycled, many bronze objects were intentionally sacrificed by being deposited in rivers and bogs, and never to be retrieved. This suggests that certain items were charged with significance and worth beyond their mere economic value.

Valerio Gentile

Showcase 8: Lithic technology in the Bronze Age

Microscopic study of the wear traces on flint tools from Bronze Age settlements shows that they had a significant role in various domestic tasks like wood, bone and hide working. Especially scrapers continue to be important in the technological system as their irregular edges are perfect for cleaning skins and are difficult to reproduce in bronze.

Another flint tool that could not so easily be replaced by bronze was the strike-a-light. But even the beautifully made 'sickles', imported from southern Scandinavia, had an unexpected story to tell. Microwear analysis made clear that they were not sickles, as their shape would suggest, but tools to cut sods with. This task may not appear as mundane as it seems, as sods were used for the construction of dwellings and burial mounds. These 'sickles' were deemed important enough to be sacrificed in special depositions away from the settlements.

Flint therefore, continued to play various roles in Bronze Age communities, despite the arrival of a shiny new material.

Annelou van Gijn, Diederik Pomstra, Annemieke Verbaas, Eric Mulder

Showcase 9: Scratching the Surface. Can we Judge Pottery By Its Cover?

Clays are complex substances, whose diversity leads to the variety of objects created from them and of the choices made by potters along the creative process. The surface of a pot bears the traces of such process and can be read just by going over its walls with our fingers, feeling the imprints left by the potter's hands, his touch, his fingermarks. Sometimes those hands do not remain anonymous, as shown in the fragments of Roman *terra sigillata* featuring the names of the vessel- or mold-maker stamped on the surface.

A major technological breakthrough in pottery making is the discovery and refinement of the glazing technique. A glaze is a glassy coating melted at high temperature that fuses with the surface of the vessel. Originated in Mesopotamia in the 9th century BC for ornamental tiles and continuously developed until modern times, glazes are complex compounds that make any surface impermeable, can be of any color and have thus a highly decorative value. Skilled potters were expected to select the ingredients properly and master the kiln temperature, a process not always successful as the many errors and trials found in excavations or modern ceramic workshops illustrate very well.

Martina Revello Lami, Loe Jacobs, Timothy Stikkelorum

Showcase 10: Ethnobotany

Ethnobotany is the study of the exploitation of plants found in an area by resident communities through a knowledge of their local culture and traditions. An example of plant use is displayed.

Silver Thatch Palms (*Coccothrinax proctorii*) are especially conspicuous at the eastern end of all three of the Cayman Islands in the Caribbean region. Up to the early 1960s, the silver thatch palm played an important role in the lives of Caymanians. The tough leaves have a variety of uses that include roofing for houses and woven hats, baskets and fans. Earlier on straw rope made from the thatch palm was highly prized in Cuba and Jamaica for use in shipping, fishing and sugar industries.

Mike Field