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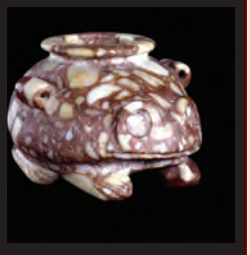
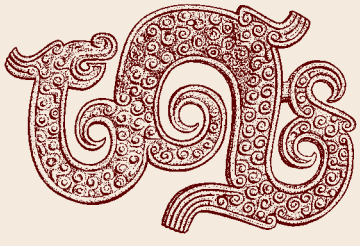

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FOREWORD

In the past, civilizations of both the Old and New World rose and fell. Through gemstones, we get a glimpse into the history of these civilizations. This book presents a large colourful fresco of the ancient world and the people who loved and admired beautiful stones.

Archaeogemology (a sub-discipline of geoarchaeology) studies gemstones used by ancient and prehistoric societies across time and space. It studies their employment in the production of tools, jewellery, amulets, gems and many other objects. Archaeogemology also involves the dating of these artefacts and the determining of the geological sources of raw materials.

The traditional names of gemstones used by archaeologists and historians often do not correspond to modern mineralogical and petrographic terminology and are frequently incorrect. The purpose of this publication is therefore to eliminate these inaccuracies and to standardize the terminology.

While working on this book, it was necessary to address not only the question of which raw materials could be considered gemstones but also the issue of which artefacts actually fall in the category of decorative objects. Like with the definition of the concept of gemstones, a broader approach was chosen, so various artefacts that do not have a clearly defined function or relationship to the cultural area were included among clearly decorative objects as well.

Highly valued gemstones followed the paths of the ubiquitous trade, and can therefore serve as markers of these ancient trade routes, literally crossing whole continents. The "stone trails" connect not only distant lands but also distant eras in time. They thus help uncover the economic and cultural contacts – sometimes truly surprising – between different regions and periods of the ancient world. And since gemstones were not used solely for decorative purposes, they also provide indirect evidence of the social and religious aspects of life in ancient societies.

The colourful world of gemstones attracts people today just as it did in ancient times. Like in the times long gone, even today the owners of precious stones believe in the protective and healing power of these spectacular creations of nature and the human hand.

ON GEMSTONES

Gemstones are masterpieces of nature, and their mysterious sparkle has enchanted people since time immemorial. The ancient belief in the magical, healing, fortune-bringing and enlightening power of gemstones contributes to this no less significantly. Because of their uniqueness and rarity, gemstones were viewed as symbols of wealth and power. The special beauty of gemstones has been a constant source of inspiration to the artistically gifted individuals in many ancient cultures that have left a distinct mark on the path to our modern civilization and their extraordinary properties secured them a firm place in the ancient history of mankind.

The term "gemstone" is not a mineralogical one but a technical one. A gemstone is supposed to have, above all, a beautiful appearance conditioned by colour, luster, transparency and other properties. It must be as unbreakable as possible. Furthermore, the rarity of occurrence is taken into account when evaluating a gemstone, while fashion, mystery and territorial peculiarities also play a part.

With regard to these criteria, any mineral, rock or organic substance from which a gemstone cut can be made – a facetless or facet-cut stone for jewellery purposes – can be considered a gemstone, or can be employed in jewellery in its natural (unworked) state, as well as in a wide range of creations, the most important of which are gems (cameos and intaglios), mosaics, gemstone inlays, gemstone vessels and sculptures. Gems are produced by stone engravers (glyptic artists).

The list of stones to which we assign the "precious" attribute changes and expands with each subsequent use of the mineral chosen for the manufacture of one of the above objects. The former division of gemstones into precious, semi-precious (these differ from precious stones in that their properties are not perfect in all aspects and their occurrence is more common) and ornamental stones is now considered inaccurate and is therefore no longer used. The term "semi-precious" stones was abandoned in 1955 with the publication of new standardized terminology for stones by the international organisation BIBOA

– Bureau International des Associations de Fabricants, Grossistes et Détaillants de Joaillerie, Bijouterie, Orfévrerie et Argenterie located in The Hague (CIBJO: Pierres précieuses et fines/Perles Définitions).

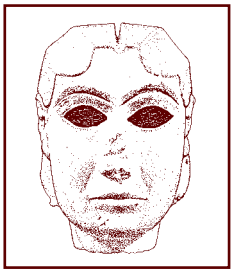
Nevertheless, the summarizing and broad meaning of the word "gemstone" retrospectively causes its blurring and partial discrediting, and thus becomes somewhat misleading, especially for the special needs of gemology, practical stone-working and commercial purposes. For the study of gemstones in antiquity, however, this "all-encompassing" term is highly appropriate. The ancient stonecutters used for decorative purposes mainly the stones which they were able to work at a particular stage of technological development. As a result, they preferred – typically in the early stages of a culture's development – softer raw materials, some of which do not, by today's standards, meet all the requirements to be classified as gemstones.

Materials of organic origin, organolites, also hold an important place in ancient stone-working. Fossil organolites include amber, jet (gagat), lignite and anthracite. More recent ones include pearls (sea and river pearls), shell (mother-of-pearl), coral, ivory, bone, horn and tortoiseshell, which were and still are among the favourite raw materials used by artisans, and the book thus also discusses ornaments made of these accompanying or supplementary materials.

Some rocks are not only used as gemstones, they are also employed in architecture and sculpture as so-called noble or decorative stones (architectural and stonework elements, statues, reliefs). The most typical of these is alabaster, but we can also mention marble, travertine (onyx) and "common" limestone, as well as "ancient porphyries" and other rocks.

CIVILIZATIONS OF THE OLD WORLD

EASTERN CIVILIZATIONS OF THE OLD WORLD



"EX ORIENTE LUX" – MESOPOTAMIA

The ancient land of Mesopotamia, situated between the Tigris and Euphrates rivers, is now referred to as Iraq. The presence of these two rivers established the country as the cradle of our civilization. Consequently, our journey to the gemstones of antiquity will commence in this region of Mesopotamia.

Moorey (1999) suggests the following Mesopotamian chronology: Prehistory: Pre-Pottery Neolithic (8000–6500 BC), the Hassuna/Samarra/Halaf culture (6500–5500 BC), the Ubaid culture (5500–4000 BC), the early/middle Uruk culture (4000–3500 BC), the late Uruk/Jemdet Nasr culture (3500–3000 BC). History: Early Dynastic Period I (3000–2750 BC), Early Dynastic Period II (2750–2600 BC), Early Dynastic Period III (2600–2350 BC), Akkadian period (2350–2100 BC), Ur III (2100–2000 BC), the Isin-Larsa period, the Old Babylonian/Old Assyrian Period (2000–1600 BC), the Kassite/Mitanni/Middle Babylonian/Middle Assyrian Period (1600–1000 BC), the Neo-Assyrian period (1000–612 BC), the Neo-Babylonian period (612–539 BC), the Achaemenid period (539–330 BC).

The alluvial deposits of Mesopotamia, which lack both metallic and stone-based materials, compelled the region to rely on external sources. It is curious that Mesopotamian stoneworkers and jewellers were able to attain such an early level of expertise in working with gold, silver, and gemstones, given that the primary Mesopotamian gemstones, lapis lazuli and carnelian, originated from distances that are hard to imagine. Lapis lazuli can be described as a significant contributing factor in the formation of ancient Near Eastern civilizations. Mesopotamia was directly linked to the Lapis Lazuli corridor from Afghanistan, and lapis lazuli became a stone of great civilizational importance. The only local materials used as raw materials for gemstones or as materials needed for the creation of gemstone artefacts were alabaster, limestone and solid bitumen (the base for gemstone mosaics and inlaid eyes of statues).

In addition to stones sourced from Assyrian quarries, the local building materials included clay, reeds and solid bitumen. If we consider Egypt as a

civilization characterised by stone, Mesopotamia should be regarded as a "civilization of clay".

The artefacts from prehistoric Mesopotamia presented by Charvát (2002) included items made of a variety of gemstones. In northern Mesopotamia, the Hassuna, Samarra, and Late Neolithic Halaf cultures flourished. The Hassuna culture is characterised by the presence of female statuettes made from "alabaster" (travertine – onyx), with eyes inlaid with shell, and "alabaster" vessels (as evidenced at *Tell es-Sawwan*), bead and pendant necklaces made from shell, chalcedony, rock crystal, carnelian, (Iranian?) turquoise, and chipped obsidian tools. The presence of carnelian (*Yarimtepe I*) and turquoise (*Tell Hassuna*), typical stones of Mesopotamian civilizations, in the 6th millennium BC context confirms the existence of long-distance trade contacts. In the Neolithic period, the earliest known examples of stamp seals appeared, crafted from dark, soft stones and featuring intricate geometric patterns. Over time, these seals began to incorporate animal and human figures. Ornaments of the Halaf culture commonly include bead necklaces of white marble, limestone, or shell; red carnelian; and black obsidian. Finds include both real-size and miniature vessels made from marble, chloritic schist, and obsidian. They also include stone human statuettes (*Tell Arpachiyah*). Stamp seals made of steatite, serpentinite, or marble display a preference for geometric patterns and animal motifs. Zoomorphic amulet seals are also common.

Southern Mesopotamia was inhabited by the people of the Ubaid culture, belonging to the Chalcolithic period. This culture gradually spread throughout Mesopotamia, replacing the Halaf culture. In the Late Ubaid layer (5th millennium BC), lapis lazuli (*Tepe Gawra*) made its first appearance in Mesopotamia. In the Ubaid culture, beads were crafted from carnelian, turquoise, lapis lazuli, diorite, marble, shell, and obsidian. Stone statuettes and vessels were also popular, often made from steatite and obsidian. Stamp seals, which featured geometric patterns and representations of animals and humans, were crafted from steatite and chloritic schist.

The Uruk culture, which gave rise to urban civilization, was a continuation of the Ubaid culture in southern Mesopotamia. The white marble female head is believed to originate from *Uruk*. The priest-king statuettes of limestone and alabaster (eyes of shell and lapis lazuli) represent the inaugural manifestation of the Mesopotamian tradition of royal statuettes. The limestone animal statuettes from *Uruk* feature eyes inlaid with lapis lazuli. The Eye Temple (*Tell Brak*) yielded a number of fascinating idols with accentuated eyes ("eye

idols"), crafted from limestone, marble, and alabaster. The vessels crafted from alabaster, steatite, and limestone are characterized by their relief decoration or polychrome geometric mosaics. Cylinder seals made from marble, limestone, magnesite, alabaster, steatite, chloritic schist, lapis lazuli, diorite, jasper, and rock crystal, offer a rich and diverse array of iconographic representations, making them a crucial source of insight into the social and cultural life of the era. They did not entirely replace the earlier stamp seals. The Uruk culture in northern Mesopotamia includes the Gawra culture, named after the site of *Tepe Gawra* where a vast quantity of beads made of turquoise, carnelian, lapis lazuli and other stones have been discovered.

During the Early Dynastic Period, southern Mesopotamia was subdivided into a number of Sumerian city-states. Free sculpture is characterized by uniformity of type. With the exception of animal figures, the sculpture depicts a single subject: the worshipper, male or female, in the position of supplicant before the deity. These votive statuettes, crafted from alabaster, limestone, or travertine – onyx, have been found in temples. The distinctive gaze of the inlaid eyes (made of shell, irises of black limestone or lapis lazuli) is one of their most striking features. Metal sculptures were also embellished with inlaid eyes. Artists created vessels from travertine – onyx, limestone, slate, marble, obsidian and steatite or chloritic schist. Some vessels were decorated with reliefs or geometric mosaics made from shell and coloured stones. A significant number of jewellery items and other artefacts originate from the Royal Cemetery at *Ur* dated to 2600–2300 BC (Woolley 1934). The beads and pendants were carved from lapis lazuli and carnelian. Rosettes and other metal objects were inlaid with lapis lazuli and carnelian by use of the cloisonné technique. Geometric and figurative mosaics enjoyed popularity during this period and were used to embellish musical instruments, game boards, and columns within temples. They were made of shell, lapis lazuli, red limestone and black slate. The presence of extra-long carnelian beads and etched carnelian beads provides evidence of interactions with the Harappan civilization. Two distinct themes are evident in the cylinder seals crafted from limestone, alabaster, marble, travertine – onyx, lapis lazuli and shell: scenes of a feast and a struggle between animals and humans (or gods). Stamp seals were also used.

The rulers of Akkad conquered the Sumerian cities and established a unified Mesopotamia under their rule. The power and wealth of the Akkadian Empire were reflected in the arts. Notable artefacts include diorite sculptures, travertine – onyx reliefs and animal statues crafted from alabaster. Akkadian bead necklaces consist of gold, carnelian, carneolonyx, sardonyx, onyx, rock

crystal, and lapis lazuli. The most sophisticated artefacts are the cylinder seals, crafted from serpentinite, rock crystal, jasper, lapis lazuli and limestone. They illustrate a rich iconography that elucidates the relationship between the world of the gods and the world of men. Some seals also feature water buffaloes, which indicate the cultural influence of the Harappan civilization.

In the mid-22nd century BC, the Akkadian kings relinquished their control of the Sumerian south. The Ur Empire was established in Ur. During the Ur III Dynasty, artists adhered to the stylistic conventions of the Early Dynastic Period. Neo-Sumerian statuettes of humans and animals (most often a lying bull with a male head) were carved from steatite, chloritic schist, alabaster, and limestone. The practice of inlaying the eyes of statues was no longer common under the Ur III Dynasty. Steatite vessels were decorated with reliefs or inserts of coloured stones. The presence of exceptionally long carnelian beads and etched carnelian beads indicates that trade with the Harappan civilization persisted. Two subjects recur with striking regularity on cylinder seals crafted from hematite, jasper, and limestone. In the opening scene, the supplicant was led before the enthroned deity by an intercessor, a minor deity. The other theme depicted the fight between animals.

During the Old Babylonian period, the Sumerian tradition of votive statuettes in temples showed no signs of decline. The statuettes made of limestone or marble featured eyes inlaid with shell or white limestone, and lapis lazuli. Notable examples of amulets included those featuring votive eyes crafted from onyx and sardonyx. The necklaces were made of carnelian, onyx, sardonyx, lapis lazuli, and gold beads. The import of Harappa carnelian beads continued. The iconography of ancient Sumerian culture is evident in Old Babylonian cylinder seals crafted from hematite and lapis lazuli, which offer a vibrant contrast to the otherwise monotonous Neo-Sumerian tradition. The hematite weights were either barrel-shaped or zoomorphic (i.e. shaped like a sleeping duck or frog). Onyx eyes dedicated to the gods also originate from the Kassite period. Kassite cylinder seals were crafted from chalcedony, agate, jasper, limestone, hematite, and lapis lazuli.

Given the dearth of available sources, our understanding of Assyrian history during the initial three-decade span of the 2nd millennium BC remains limited. One exception is the existence of Old Assyrian trading colonies in Anatolia (see chap. 'Anatolia: The Bridge Between East and West'). The kingdom of Mitanni was established around the middle of the 2nd millennium BC. The Mitannians exerted considerable influence over Assyria, both politically and culturally. They adopted the Mesopotamian type of cylinder seal. The cylinders were engraved

with original motifs featuring mythical animals, sacred columns, stylized trees of life, winged discs, palmettes and figures. In Mesopotamian tradition, heroes traditionally display hair of six curls. In addition to hematite, the Mitannian-style seals were made of chalcedony, agate, carnelian, jasper, chert (hornstone), and dark, soft stones. In circa 1300 BC, the Mitanni were conquered by the Assyrians and incorporated into the Assyrian empire. Assyrian glyptics was influenced by the art of the Mitanni. It features a plethora of animals, hybrid beings, and deities. The level of vitality and the modelling of the figures reach a standard hitherto unknown in Mesopotamia since the Akkadian period. In the 13th century BC, cylinder seals depicting a fight between animals (e.g. a fight between a winged horse and a lion) were produced. The rich Middle Assyrian Grave 45 in *Ashur* contained travertine (onyx) jugs or amphorae with handles on a tall foot. Similar examples have been found in *Nineveh*.

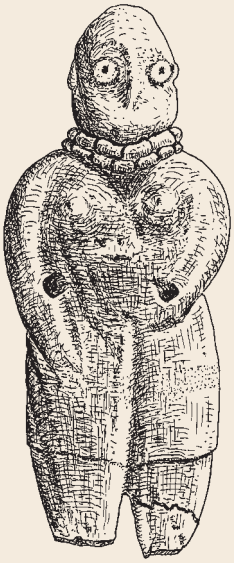
In the Neo-Assyrian Empire, the local "Mosul marble" – alabaster (gypsum) – was used on a massive scale. The walls of rooms and courtyards in royal palaces and temples were lined with alabaster relief panels, and palace entrances were guarded by alabaster monsters, which took the form of winged bulls or winged lions with bearded human heads. Vessels were made of alabaster, travertine – onyx, and steatite, as well as rock crystal, chalcedony, agate, and obsidian, which were reserved for the production of luxury items. Furniture decorated with plaques of carved ivory was a symbol of wealth. Ivory objects in the style of Phoenician, Syrian and Assyrian art were accentuated by polychromy or gold leaf and inlaid with carnelian, lapis lazuli, and glass. The gold jewellery of the Neo-Assyrian queens of *Nimrud* (Kalhu), inlaid with turquoise and carnelian, is characterised by the prominent use of onyx, sardonyx and carnelian eyes. Necklaces dominated by gold, carnelian and onyx beads were common. Cylinder seals crafted from carnelian, chalcedony, serpentinite, grossular and steatite displayed motifs that were adapted in style to align with contemporary alabaster reliefs, which depicted deities, cult scenes and battles against winged monsters. Stamp seals, which replaced cylinder seals, made a return.

Babylonia of the Neo-Babylonian period marked the final chapter of Mesopotamian culture. Vessels were made from alabaster, marble, and agate, while cosmetic boxes were carved from ivory. The treasure from *Ur* includes a gold pendant featuring a sardonyx eye. An eye-shaped bead crafted from sardonyx is part of a necklace comprising carnelian and agate beads. In some cases, eyes carved from onyx or sardonyx have been found to be engraved with an inscription. Eye-shaped amulets are regarded as a distinctive feature of Achaemenid material culture. Nevertheless, the Achaemenids merely

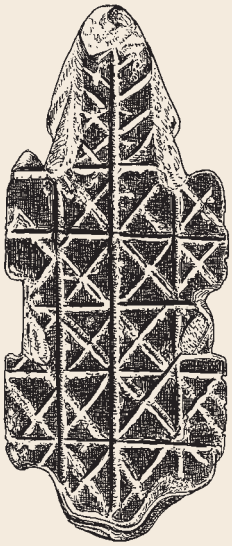
perpetuated the traditional Mesopotamian practice of carving eyes from onyx, sardonyx and carneolonyx, a tradition that originated in ancient Babylonia and persisted throughout the Neo-Assyrian and Neo-Babylonian periods (Mrázek 2011, 2013). Amulets made of blue chalcedony, obsidian, and shell were particularly popular. Weights in the traditional form of a sleeping duck were carved from sardonyx. Cylinder seals depicting a battle scene were made from chalcedony, carnelian, and lapis lazuli and were used in conjunction with stamp seals in the shape of a pyramid, cone, or duck.

In the Achaemenid period, Mesopotamia produced vessels made of granite, basalt, limestone, marble, alabaster, slate, and serpentinite. Agate was used for precious vessels.

Statuettes from the Parthian period were made of alabaster, limestone, marble, and ivory. Gold jewellery was decorated with almandine, chrysoprase, malachite, and pearls.



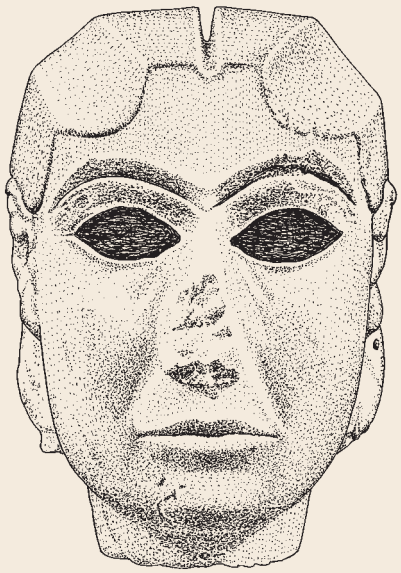
Standing female figurine made of travertine (onyx), with shell inlays set in bitumen representing the eyes; the figurine wears a necklace made of beads (Tell es-Sawwan, Iraq, Neolithic, c. the middle of the 7th millennium BC, Iraq Mus.). (Drawing: Lea Píchová)



Stamp seal (1.4 × 1.1 × 2.6 cm) made of steatite or chloritic schist. This seal represents a hedgehog, its stamping surface is decorated with geometric patterns (Northern Mesopotamia or Syria, Halaf period, c. 5600–5000BC, Metropolit. Mus.). (Drawing: Lea Píchová)

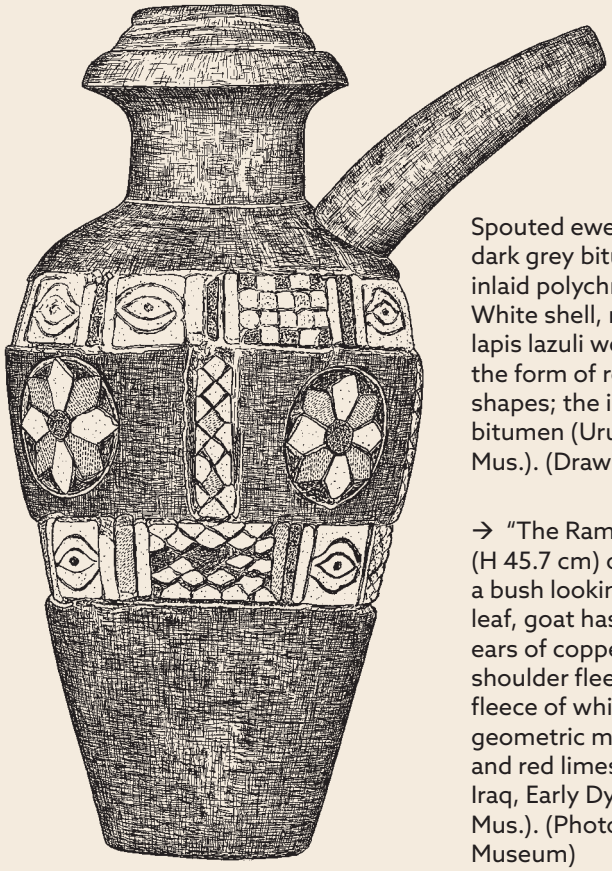
Vessel made of banded travertine – onyx (Tell es-Sawwan, Iraq, Neolithic, c. the middle of the 7th millennium BC, Iraq Mus.). (Drawing: Lea Píchová)

Stamp seal (0.5 × 2 × 2.1 cm) made of steatite or chloritic schist, decorated with horned animal and stylized bird (Syria or Anatolia, Ubaid period, 6th–5th millennium BC, Metropolit. Mus.). (Drawing: Lea Píchová)



The head – mask, known as "The Lady of Uruk or Warka", is considered to be the first life-size (H 20.1 cm) depiction of the portrait of a woman. This mask of white marble was most likely originally part of a whole, life-size statue. The hollowed out eyes and eyebrows may have been inlaid with shell used for the whites and lapis lazuli for the irises. Performations at the ears indicate that the head once wore earrings (Uruk, Iraq, Uruk Period, 3500–3250BC, Iraq Mus.). (Drawing: Lea Píchová)

Standing male worshiper (29.5 × 12.9 × 10 cm) made of alabaster (gypsum), with clasped hands and a wide-eyed gaze. It was placed in the "Square Temple" at Tell Asmar. The eyes are inlaid with shell and black limestone (Mesopotamia, Eshnunna – modern Tell Asmar, Sumerian, Early Dynastic I–II, c. 2900–2600BC, Metropolit. Mus.). (Drawing: Lea Píchová)

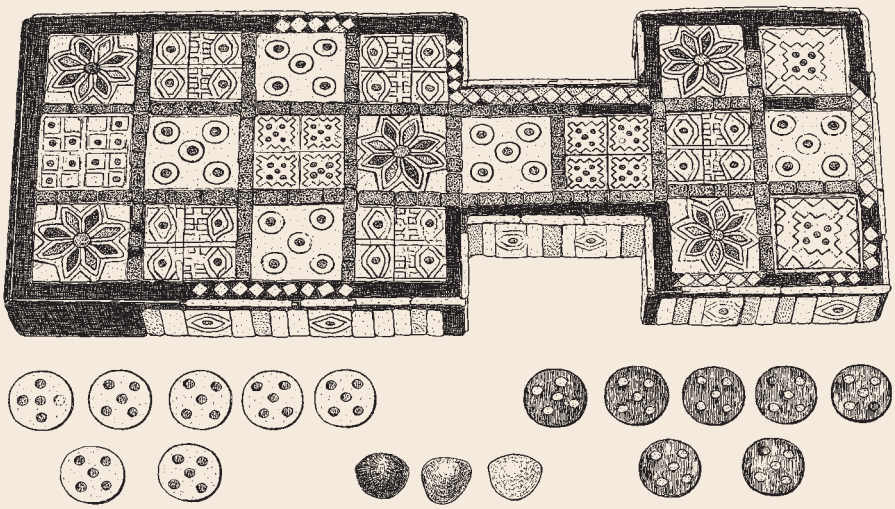


Spouted ewer (H 14 cm) carved from dark grey bituminous limestone has inlaid polychrome design – mosaic. White shell, red limestone and blue lapis lazuli were used to form inlays in the form of rosettes, eyes or geometric shapes; the inlays were secured with bitumen (Uruk, Iraq, c. 3000BC, Iraq Mus.). (Drawing: Lea Píchová)

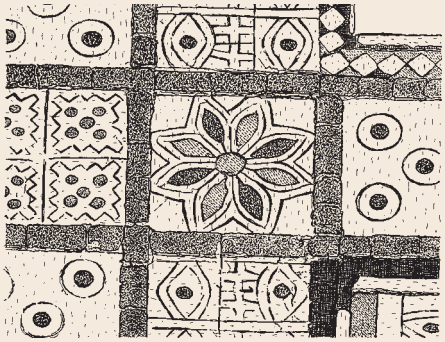
→ "The Ram in the Thicket" – statuette (H 45.7 cm) of a goat perched against a bush looking for food; tree is of gold leaf, goat has face and legs of gold leaf, ears of copper-alloy, horns, eyes and shoulder fleece of lapis lazuli, body fleece of white shell; pedestal with geometric mosaic decoration in shell and red limestone (Royal Cemetery Ur, Iraq, Early Dynastic III, 2600BC, Brit. Mus.). (Photo: © Trustees of the British Museum)

Bearded bull's head (23.5 × 23 × 12.1 cm) cast of copper is brought to life with inlaid eyes of lapis lazuli and shell (Mesopotamia, Sumerian, Early Dynastic III, 2600–2450BC, Saint Louis Art Mus.). (Drawing: Lea Píchová)

Lapis lazuli and carnelian bead head-dress with gold leaf pendants (Royal Cemetery Ur, Iraq, Early Dynastic III, c. 2600BC, Brit. Mus.). (Photo: © Trustees of the British Museum)



"The Royal Game of Ur" – wooden game-board (30.1 × 11 × 2.4 cm); top covered with 20 square shell plaques inlaid with lapis lazuli and red limestone; some sculptured with an eye and some with rosettes. Two sets of seven game pieces, white (made of shell, inlaid with five dots of lapis lazuli), and black (made of shale, inlaid with dots of shell), as well as shell, limestone and shale dice belong to the game-board (Royal Cemetery at Ur, Iraq, Early Dynastic III, 2600–2400BC, Brit. Mus.). (Drawing: Lea Píchová)



"The Royal Game of Ur" – wooden game-board (detail). Square plaques of white shell with carved patterns are inlaid with coloured stones. The incrustation of the middle square represents a rosette (disk of red limestone surrounds petals alternately red (limestone) and blue (lapis lazuli), other squares are inlaid with circular inlays of lapisu lazuli, lapis lazuli also represents iris of the eyes (Royal Cemetery at Ur, Iraq, Early Dynastic III, 2600–2400BC, Brit. Mus.). (Drawing: Lea Píchová)

→ Mosaic column (D 31 cm) formed part of a group of architectural decorations (temple entrance). The column originally had core of palm wood. This had been coated with bitumen. The inlays are made of mother-of-pearl, pink limestone and black bituminous shale (Temple of Ninhursag, Tell al-Ubaid, Iraq, Early Dynastic III, 2500BC, Brit. Mus.). (Photo: © The Trustees of the British Museum)

Cylinder seal (H 2.8 cm) made of red jasper (Akkadian Mesopotamia, 2220–2159BC, Metropolit. Mus.). This seal depicts one of the four nude heroes, kneeling and holdind a staff with a banner. Between the banners is a symbol – fish. (Drawing: Lea Píchová)

Stone cylinder seal and modern impression with a presentation scene and an inscription. This seal depicts the presentation of a worshiper to a seated deity. An interceding goddess in a tiered dress leads the worshiper who holds one hand before his face in a pious gesture (Iraq, Third Dynasty of Ur). (Drawing: František Rejl)

Colossal alabaster (gypsum) statue (H 350 cm, L 371 cm) depicting a human headed winged lion; one of a pair that flanked the doorway of the throne room of the North West palace of Ashurnasirpal in Nimrud that helped provide magical protection. The five legs suggest that the lion was intended to be viewed from the front or side and not at an intermediate angle (North West Palace, Nimrud, Iraq, Neo-Assyrian, 865BC–860BC, Brit. Mus.). (Photo: © Trustees of the British Museum)

Alabaster (gypsum) wall panel (H 98 cm, W 139.5 cm) depicting a lion hunt in relief: the archer shooting a bow wears a diadem. This figure may be Ashurnasirpal II, or his son Shalmaneser III. The chariot is typical of its period, and is pulled by three horses. A lion has been hit by three arrows. There are traces of the standard inscription at the top of the panel (North West Palace, Nimrud, Iraq, Neo-Assyrian, 875BC–860BC, Brit. Mus.). (Photo: © Trustees of the British Museum)

Ivory furniture panel (H 6.9 cm, W 7.8 cm) in openwork showing a male human-headed winged sphinx walking amongst flowering plants. He wears the double crown of Upper and Lower Egypt, and hanging from his chest is an apron with a projecting uraeus – cobra (Fort Shalmaneser, Nimrud-Kalhu, Iraq, Phoenician, 900BC–700BC, Brit. Mus.). (Drawing: Lea Píchová)

Ivory head or mask (16 × 13.2 cm), carved in relief, known as "The Mona Lisa of Nimrud". The face is of a beautiful woman. The eyebrows and eyelids are emphasized with black colour, as are the large black pupils. Her hair is tied by a double band. Frame, around top and bottom, pierced with dowel holes, originally fitted with ivory studs, of which two now remained (Well of the North West Palace, Nimrud-Kalhu, Iraq, Neo-Assyrian, 8thC BC, Iraq Mus.) (Drawing: Lea Píchová)

ANATOLIA – THE BRIDGE BETWEEN THE EAST AND THE WEST

Turkey is situated in the region of Asia Minor, and to a lesser extent, in south-eastern Europe. Asia Minor is a peninsula positioned between the Mediterranean Sea, the Aegean Sea, the Marmara Sea and the Black Sea. It encompasses approximately two-thirds of the Asian portion of Turkey. Geographically, the term is often used to refer to the entire Asian region of Turkey. The term "Asia Minor" is synonymous with Anatolia. The term originated during the Roman Empire and is derived from the ancient Greek "Anatole," meaning "east."

Anatolia, the cradle of civilization, is home to numerous world firsts. These include the megalithic complex of Göbekli Tepe (the oldest known sanctuary in human history), the "Urfa Man" (the oldest life-size statue of a man discovered), and Çatalhöyük (the first known "city" on the planet, where the world's oldest mirrors were found). The Hittite Empire was the first empire to be established on Anatolian territory in antiquity. The region's rich and varied archaeological heritage makes it an apt candidate for the designation of an "archaeological landscape."

Anatolia, the land bridge between Asia and Europe, has played a significant role in the history of human settlement, migration and the dissemination of technological innovation. One illustrative example is the tradition of stamp seals in Anatolia, which has persisted since the Pre-Pottery Neolithic period. With the advent of Assyrian merchants during the period of Old Assyrian trading colonies, the Anatolians rapidly adopted cylinder seals (seals of Mesopotamian shape). An overview of the gemstones of Anatolia in antiquity is provided by Mrázek (2024a).

The chronology of the Neolithic in Anatolia was published by Kuzucuoğlu (2015). The Neolithic in south-eastern and central Anatolia is divided into the Pre-Pottery Neolithic (c. 10200–7000 BC) and the Pottery Neolithic (c. 7000/6900–6100/6000 BC). In central Anatolia, the Pre-Pottery Neolithic is divided into two phases: the early Pre-Pottery Neolithic (c. 10200–8500 BC) and the late Pre-Pottery Neolithic (8500–7000 BC). Pottery Neolithic in Anatolia is divided into

two phases: the early Pottery Neolithic (c. 7000/6900–6500/6400 BC) and the late Pottery Neolithic (c. 6500/6400–6100/6000 BC). The Chalcolithic in western Anatolia is divided by Schoop (2005) into the Early Chalcolithic (6100–5500 BC), Middle Chalcolithic (5500–4250 BC) and Late Chalcolithic (4250–3000 BC). The Bronze Age in Anatolia is divided by Özdoğan (2023) into the Early Bronze Age (3200–2000 BC), Middle Bronze Age (2000–1550 BC) and Late Bronze Age (1550–1100 BC). The period of the Old Assyrian trading colonies (c. 1970–1700 BC) falls in the Middle Bronze Age. The Late Bronze Age Hittite civilization is divided into two periods: the Old Hittite (called the Old Hittite Empire) or Old Hittite Kingdom period (1750–1450 BC) and the Neo-Hittite (called the Neo-Hittite Empire) or Hittite Empire period (1450–1200 BC). The Neo-Hittite or Late-Hittite city-states period or the hieroglyphic Hittite period (c. 1200–700 BC) and the Kingdom of Urartu (840–585 BC) fall in the Iron Age. In Gordion, the Iron Age (c. 1200–550 BC) is identical in significance to the Phrygian period ("The Gordion Archaeological Project"): the early Phrygian period (c. 950–800 BC), the middle Phrygian period (c. 800–550 BC), the late Phrygian period (c. 550–330 BC) is referred to as the Achaemenid period, the Hellenistic period (330–100 BC), and the Roman period. The chronology of Lydia (Roosevelt 2010) can be divided into the pre-Lydian period (pre-12th century BC), the early Lydian period (c. 12th century to 7th century), the middle Lydian period (c. 7th century to 547/545 BC), the late Lydian (Achaemenid) period (c. 547–217 BC), and the post-Lydian period (late 3rd century BC to 3rd century AD).

In the megalithic complex at *Göbekli Tepe* (Pre-Pottery Neolithic), limestone heads were discovered (Schmidt 2010). These sculptures are categorised similarly to the limestone sculpture of "Urfa Man". Obsidian blades are set in the eye sockets of the sculpture in lieu of eyes. It is common for limestone bowls and thin-walled vessels made of "greenstones" to be decorated with engraved geometrical or zoomorphic ornaments (Dietrich, Dietrich, and Notroff 2020). Once damaged, these vessels were repurposed as raw material for the production of beads, pendants and spacers. A considerable number of stone beads and pendants (Mellaart 1967, Bains et al. 2013) and obsidian mirrors (Vedder 2005) have been recovered from *Çatalhöyük*, a site dating to Pottery Neolithic. Statuettes occur in all layers of the site (Mellaart 1967, Omura 1984). The limestone statuettes depict a "Goddess sitting on a leopard" and a "Boy on a leopard". The "Double goddess" is made of marble, akin to the seated "Mother goddess". It was uncommon for statues to be crafted from alabaster, slate, basalt, or chalk. Pendants (Pottery Neolithic), comprising a goddess figure in

mother-of-pearl, a bull's head in serpentinite and an ox in limestone, originate from *Hacilar*, while anthropomorphic pottery vessels (early Chalcolithic) are inlaid with obsidian (Brami and Heyd 2011). The Late Neolithic figurines from *Domuztepe* are characterised by a prevalence of flat, standing female figurines crafted from local soft stones (Belcher & Croucher, 2016). Serpentinite and obsidian bowls, cups, plates, and jugs have been recovered from *Domuztepe* (Carter, Campbell, Gauld 2003). In *Kulaksizlar* (middle Chalcolithic), marble pointed beakers and bowls, and Kilia-type female figurines were produced (Roosevelt 2010, Takaoğlu 2011). An overview of Neolithic beads and pendants from Anatolia is presented by Özdoğan (2016), while Neolithic bracelets are reported by Martínez-Sevilla et al. (2021). In the Neolithic and Chalcolithic periods, more than 40 distinct varieties of gemstones were used in the region of Anatolia. Some hard stones (agate, carnelian) were already in use during the Pre-Pottery Neolithic period. In the Pottery Neolithic period, marble, limestone, carnelian, agate, 'greenstone', turquoise and malachite, were used to make beads. The variety of shapes observed in the beads and pendants is astonishing. In *Çayönü*, limestone was used to make both simple and ribbed bracelets, a practice that commenced during the Pre-Pottery Neolithic period. An obsidian bracelet demonstrates the technical sophistication of its makers (*Aşikli Höyük*). Bracelets crafted from marble and basalt have been unearthed at *Cafer Höyük*. Neolithic stamp seals from Anatolia, displaying either geometric or linear patterns, are crafted from an unidentified stone, steatite and limestone (Yalçin 2016). Serpentinite dominates among the raw materials of the seals of the Halaf culture from *Domuztepe* over quartzite, gypsum, clay shale, sandstone, limestone, and chert (Carter 2010).

A hoard from the Early Bronze Age, unearthed in *Troy*, comprised axe heads crafted from nephrite, jadeitite, and lapis lazuli, adorned with engraved embellishments. Additionally, the assemblage included rock crystal bullae heads, lenses and discs, along with a long cylindrical bead crafted from carnelian (Traill 2008). A long barrel-shaped bead is attributed to the settlement layer (Pieniążek 2017). Carnelian beads of a long biconical shape form part of a hoard from the Early Bronze Age, originating from *Eskiyapar* (Ludvik et al., 2015). The shape, extreme length and straight drilled hole of the carnelian beads indicate that they derive from the Indus Valley civilization (Kenoyer 2005). Troy-type marble idols with owl heads have been discovered in *Troy* and in other locations in Anatolia. Headless alabaster idols and "Kültepe-type idols", which are characterized by a disc-shaped body, a long neck, and a schematic head, originate from *Kültepe* and date to the Early Bronze Age

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