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BAKANLIĞI



GEÇMİŞİN IŞIĞINDA
AYDINLATMANIN KRONOLOJİSİ

IN THE LIGHT OF THE PAST

A CHRONOLOGY OF ILLUMINATION



REZAN HAS
MUSEUM



İSTANBUL
ARKEOLOJİ
MÜZELERİ

1869

In the Light of the Past: A Chronology of Illumination



The illumination of darkness was a crucial step in humanity's historical development. Anthropological studies among the tribal communities have revealed a distinct difference between conversations held during the day and those around the fire at night. Oral traditions, including stories, fairy tales, myths, legends, and beliefs, were born in this environment and evolved as they diversified. For this reason, the emergence of light from darkness holds a unique and meaningful place among many other aspects of human progress.

Since the time humans began crafting tools, likely as early as the Paleolithic Period, they must have sought ways to illuminate the darkness they experienced alongside the cycle of day and night. Within the caves where the earliest traces of human activity have been identified, light was essential, especially during the harsh conditions of the Ice Age outside. To meet this need for illumination, early humans not only relied on fires lit within caves but also developed methods to "carry" fire, such as torches, and utilized lamps capable of storing and burning fuel.

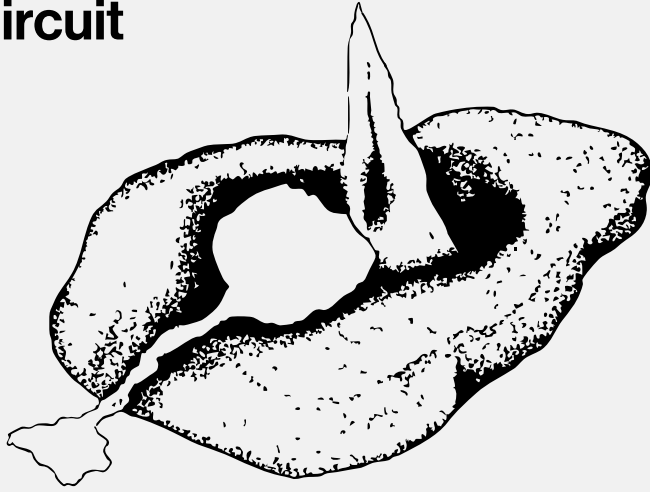
When the Ice Age ended and humans moved out of caves, it is safe to say that in their hands they carried, at the very least, a simple torch. Yet the duration of the light was crucial. This need influenced the choice of materials, and instead of substances that burned out quickly, more durable materials, such as tar, were used. Torches made in this way not only provided longer-lasting light but at times also carried symbolic meaning, continuing to be used up to the present day.

Although no concrete traces of torches have been found in archaeological excavations and research, due to their organic material composition, numerous stone lamps of various forms bearing traces of burning have been discovered in inhabited caves across Europe.

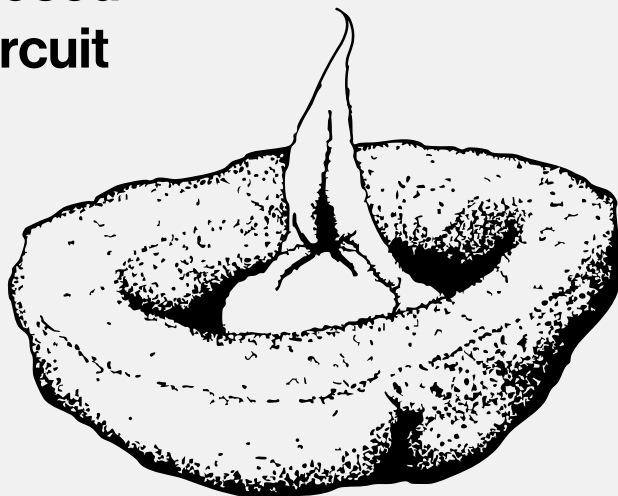
It can be said with certainty that from the earliest times, humans met their need for light with torches and lamps. Throughout history, candles were later added as a third source, enriching humanity's need for illumination through these three devices, along with the stands and holders that developed within the cultural settings in which they were used.

Pioneers – The Neolithic Period and Beyond

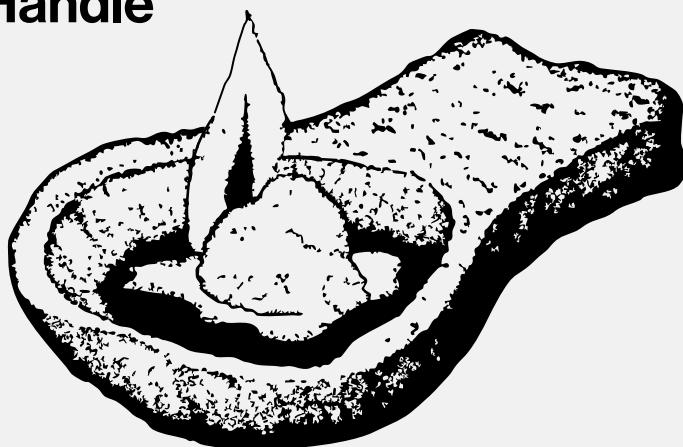
**Open
Circuit**



**Closed
Circuit**



**Carved
Handle**



During the Aceramic Neolithic Period, when humans left the caves, adopted a settled lifestyle, began farming, and domesticated various plants and animals, stone vessels were identified. These shallowly carved stone bowls are thought to have been used as lamps.

Towards the end of this period, the emergence of a settled agricultural culture and the storage of surplus produce led to social stratification, paving the way for the establishment of cities. Mesopotamia, with its fertile plains, had already been a landscape densely populated by Neolithic settlements. It is therefore within this region that the earliest cities began to appear. The Chalcolithic Period, dated between 5000 and 3000 BCE, marks a stage in which agricultural surpluses were stored, the concept of the temple emerged, and consequently, new divisions of labor and occupational specializations arose. This trajectory, initiated with Sumerian civilization, continued with the Akkadians, Babylonians, and subsequently the Assyrians. At the same time, the southern Mediterranean witnessed the birth of Egyptian society. All these cultures were organized around temples and palaces.

Owing to the monumental scale of these structures, torches must have been the primary means of illumination. However, there is no concrete evidence regarding the methods employed in smaller spaces or how ordinary households were lit. It is likely that domestic hearths, primarily used for cooking, simultaneously served as sources of light. Equally significant are the shell-shaped lamps of gold and silver discovered in the Royal Tombs of Ur, which suggest that actual seashells may also have been employed as lamps.

The Emergence of the Candle

When the eastern Mediterranean, including Anatolia, entered the Bronze Age (ca. 3000–1000 BCE), the region, much like in earlier times, was encircled by powerful empires. In the west, the Mycenaean culture in Greece and the Minoan civilization centered on Crete; in Anatolia, the Hittites; in Mesopotamia, the Assyrians; and in the south, across the Mediterranean, the Egyptian society, each distinctive in character yet in constant contact and interaction with one another—together established a new world order.

The Bronze Ages represent a period in which bronze, an alloy of copper and tin, was widely employed in the manufacture of various tools and objects, accompanied by significant technological advances in numerous fields of production. Within this context, one of the outcomes of developing processes to obtain vegetal and animal oils was the invention of the candle, which began to be produced during this era.



From a Simple Bowl to an Oil Lamp

In the broader course of human history, the first millennium BCE can be defined as the era during which Ancient Greek civilization, whose roots extend back to the third millennium, gained strength and expanded first across the Aegean and then throughout the Mediterranean Basin. The portion of this period roughly spanning 1000–800 BCE is commonly referred to as the “Dark Ages,” owing to the scarcity of available information. At the outset of this era, populations were small, and the alphabet used during the Bronze Age had been forgotten. Archaeological evidence reveals traces of destruction in many settlements, while the great kingdoms of the preceding age had vanished.

Excavations conducted in settlements dating to the same periods have uncovered handmade clay lamps. Thought to be a Phoenician invention, these lamps were bowl-shaped, with one side pinched or pressed inward from both edges to create a designated area for the wick. This form likely retained its popularity until as late as the 11th century CE, owing to its ease of production by hand. The shaping of a specific section for the wick in such lamps may be interpreted as the application of a new technical innovation.



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In time, the bodies of lamps became deeper, their upper sections were covered to prevent fuel from spilling, spouts were added to hold the wick, and handles or grips of various forms were attached to facilitate transport. Similar forms continued to be favored during the Islamic Period; however, an additional bowl was also placed beneath the lamp.

The closure of the upper section of the oil reservoir created a surface suitable for decoration, and over time, fashions emerged in both technical application and, consequently, in form, as well as in ornamentation. Certain shapes, motifs, and decorative schemes gained popularity. For this reason, from the 7th century BCE onward, it has become possible to trace lamp forms typologically and to establish chronologies based on the lamps unearthed in excavations carried out in various ancient cities.





Clay lamps were shaped by hand, on the potter's wheel, or with the use of molds. Although the earliest examples were handmade, and mold production became increasingly widespread over time, all three techniques continued to be employed until the use of lamps ultimately came to an end.

In addition to clay, lamps were also produced from stone and metal. Only a small number of examples made of precious metals have survived to the present; however, numerous bronze lamps can be found in museums and private collections today. From the mid-4th century CE onward, lamps made of glass also appear.



Materials Used

The significance of the fuel and wick materials employed in lamps can be inferred from ancient sources that describe aspects of daily life. In certain works, containing such accounts, particular reference is made to the unsightly traces of lamp soot on wall paintings, sculptures, or vessels. One may thus imagine slaves cleaning wall paintings or walls with wet sponges after lavish evening banquets. The primary cause of this was the quality of the oil and wick used in the lamps. For instance, a thin wick would burn quickly and produce abundant soot; a similar problem must also have arisen with thick wicks. Moreover, because a thick wick could not easily absorb the oil, the flame risked becoming dim or extinguishing altogether. For these reasons, the quality of the materials employed in lamps and other lighting devices was of critical importance.

Vegetal and animal oils were used as fuel in lamps, while cellulose-based organic materials served as wicks.



Supporting Tools

Oil was probably poured into the lamp with the help of vessels fitted with a spout on one side. In addition, regardless of the material from which they were made, as the wick inside the lamp burned down, it had to be drawn up, a task carried out with tweezers or needles.

At times, when the wick needed to be straightened, blade-shaped wick trimmers were also employed.

These needles, tweezers, or trimmers were often hung from the lamp's suspension devices.





Subjects

Lamps of standard form often bear a wide variety of decorations, many of which depict scenes from daily life, thereby contributing to our understanding of social life in antiquity.

Among the prominent themes are religious scenes, historical figures, daily activities, animals, and vegetal motifs. Gladiatorial games, imitations of popular works, and mythological subjects were also frequently and favorably represented.

Torches, Candles, Lamps, Their Holders, and Other Accessories

Torches, candles, and lamps, used by people to illuminate their homes, palaces, or streets, and occasionally public buildings such as baths or theaters at night, were often placed in a wall niche or on a shelf to serve their purpose. Yet, for drunken revelers returning from joyful evening feasts, for travelers, or for slaves lighting the way of a master coming home late at night, accessories were necessary to carry these devices with ease. Moreover, such implements could not simply light the night in the houses of the wealthy; they also had to be ornate and impressive, reflecting the taste and refinement of the period. Thus, into the history of lighting entered carriers such as the lantern, the candelabrum, and the lykhnouhos.

In street lighting, lanterns were employed, for instance, to enable walking at night, to be hung in front of shop doors during avenue illumination, or to be suspended from the sterns and bows of ships, both to light the night and to serve as a means of communication. These lanterns were referred to as Laterna—lanterns.





One of the most frequently used devices for indoor lighting was the candelabrum. There are two primary types: wall-mounted and freestanding. Wall-mounted examples appear from the Late Bronze Age onward in the Near East and Egypt, while freestanding candelabra generally begin to be attested in Near Eastern and Mediterranean cultures from the first millennium BCE.

From the 5th century BCE onwards, depictions of such a stand consisting of a shallow bowl set upon a tall base can be found in various vase paintings. Metal examples of these lamp holders were produced throughout the Roman Imperial Period in a wide range of forms and heights. Candelabra were generally composed of three main parts: a base shaped with three feet, a stem placed above it, which could sometimes be adjusted to different heights and presented in various profiles, and finally a bowl at the top containing a sharp socket that secured the lamp in place. This socket, situated on the upper platform, was fitted into the recess at the bottom of the metal lamp, ensuring that the lamp could be used safely.

While candelabra were designed to carry lamps or torches atop tall stands, some examples were fashioned as statues. These sculptural candelabra stood on high pedestals within homes and likely played a significant role in interior decoration. Their appeal was not limited to the lighting devices they held; the interplay of light and shadow cast by these lamps across the sculpted figures would have created a striking visual spectacle for guests. Particularly grand examples of such candelabra have been found in the houses of Pompeii.

Church lighting was achieved using devices that held numerous glass lamps or candles. For example, during the Byzantine Period, polycandilion—which consisted of multiple glass lamps set within a heavy metal framework—provided far greater illumination than even multi-nozzled terracotta lamps. These devices, often in disk, square, or rectangular forms and sometimes height-adjustable, were designed to carry candles, lamps, or both, and were produced in a wide variety of forms and materials.





Another lighting practice observed in Byzantine churches was the use of the "Chorus". Countless polycandilion and candleholders, suspended from chains descending from the central dome, increased the overall illumination within the church, while the flickering lights cast upon the walls created a striking and immersive atmosphere.

More Than Just Lighting?

While lighting the darkness served a practical purpose, the positive emotions it evoked also allowed torches, lamps, and candles to acquire additional symbolic meanings. For instance, in Ancient Greek vase paintings depicting wedding ceremonies, the torches held by participants accompanying the bridal procession not only indicate that the event took place at night but also symbolically mark the bride leaving her father's home to her husband's home, signaling a change in her social status.

It is also known that torch races were held in the Ancient Greek world. Similar to modern relay races, the torches used in these events are depicted on certain city coins and vase paintings.

In the Eleusinian ceremonies, about which our knowledge of cultic activities remains limited, torch-lighting formed an important part of the ritual alongside dance and various other activities. Torches lit at night symbolically represented the passage through the darkness of the underworld, signifying death rather than rebirth. The interplay of night's darkness and the light reflected from the torches created the necessary atmosphere for the ceremony; with the rising of the sun, death had occurred, and a new existence in the other world had begun.

The torch was also employed as a weapon. For example, in the reliefs of the Great Altar of Pergamon, the goddesses Artemis and Hecate are depicted attacking their enemies with torches. In addition, torches were widely used in military tactics to confuse opponents and as tools of communication.

During the Roman Imperial Period, under the reign of Emperor Domitian, various light displays using torches were organized, and gladiatorial games began to be held at night as well.

Lamps also held a special place in religious ceremonies, divination practices, and magical acts. During the Roman Imperial Period, certain ritual spells employed lamps that were painted white and never lit. In Egypt, the lamp festival is believed to have been associated with the birthdays of deities, such as Isis or Horus in August, and Osiris in December.

Lamps, through the motifs they bear, also convey various allusions to the religious and social life of their respective periods. Traditional practices existed, such as noble companions gifting one another lamps for the New Year—for example, lamps featuring a figure of Nike holding a shield inscribed with ANNVM NOVVM FAVSTVM FELICEM (“A Happy and Prosperous New Year”).

In Ancient Greece and Rome, carrying light before high-ranking individuals as a form of honor, as well as the continuous burning of lamps around the portraits of nobles, likely symbolized these figures as sources of illumination and guidance for others. This practice, one of the ways to pay tribute to prominent individuals, is believed to have continued into the Byzantine Period, evolving into the tradition of illuminating icons of saints within churches.

Light held significance not only in pagan religions but also in monotheistic faiths. In Sophronius’ 7th century CE work, he states: “Lamps and candles are symbols of eternal light, yet they also reflect the light that will emerge from the righteous when they are resurrected.” The lighting of a lamp to symbolize the reading of Scripture, the identification of the church itself as Christ’s lamp, and the depiction of lamps as the stars of the heavens—all reflect the religious meanings ascribed to the lamp and, by extension, to the light it produces.

One of the most beautiful depictions of light in Islamic culture is found in the Qur’an, Surah al-Nur, verse 35: “Allah is the Light (the illuminator) of the heavens and the earth. The example of His Light is like a lamp with a flame burning within it. That lamp is enclosed in crystal, and the crystal is as if it were a star resembling a pearl, lit from the oil of a blessed tree, neither of the East nor of the West. (This is such a tree that) Its oil would almost shine forth even if fire did not touch it. (This Light is) Light upon Light. Allah guides to His Light whom He wills. Allah sets forth examples for mankind (in this way), and Allah knows everything.”

THE DEVELOPMENT OF THE LAMP



Middle and Late Bronze Age
5799 (P.T.) – IAM



Archaic Period (?),
8th–6th cent. BCE
2033 – RHM



Iron Age,
8th cent. BCE
3874 (Ç.Ç.) – IAM



Archaic Period,
Late 7th cent. to early 6th cent. BCE
6384 (P.T.) – IAM



Classical Period,
Late 6th cent. to the 5th cent. BCE
1910 – RHM



Classical Period,
Late 5th cent. BCE
4220 (P.T.) – IAM



Hellenistic Period,
First half of the 3rd cent. BCE
1917 – RHM



Hellenistic Period,
2nd cent. BCE
833 (P.T.)-IAM



Hellenistic Period,
2nd–1st cent. BCE
1918-RHM



Hellenistic Period,
2nd–1st cent. BCE
1915-RHM



Hellenistic Period,
2nd–1st cent. BCE
1606-RHM



Late Hellenistic–Early Roman Period,
1st cent. BCE to 1st cent. CE
74.34 (P.T.) – IAM



Early Roman Imperial Period,
1st cent. CE (30–70 CE)
1955 – RHM



Roman Imperial Period,
1st cent. CE
2039 – RHM



Roman Imperial Period,
Mid-1st cent. CE
6847 (P.T.) – IAM



Roman Imperial Period,
First half of the 2nd cent. CE
1956 – RHM



Roman Imperial Period,
2nd–4th cent. CE
75.29 (P.T.) – IAM



Late Roman Period,
3rd–5th cent. CE (?)
6983 (P.T.) – IAM



Late Roman–Early Byzantine Period,
4th–6th cent. CE
2046 – RHM



Late Roman–Early Byzantine Period,
4th–6th cent. CE
2047 – RHM



Late Roman–Early Byzantine Period,
5th–7th cent. CE
7284 (P.T.) – IAM



Early Byzantine Period,
5th–7th cent. CE
1615 – RHM



Byzantine Period,
5th–6th cent. CE
1613 – RHM



Byzantine Period,
5th–6th cent. CE
923 (P.T.) – IAM



Byzantine Period,
5th–7th cent. CE
2042 – RHM



Byzantine Period,
6th–7th cent. CE
1987 – RHM



Byzantine Period,
6th–8th cent. CE
15.639 (P.T.) – IAM



Seljuk Period
1617 – RHM

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