

## **Highlighting Some Important Gemstones in Ancient Egypt (From Predynastic till end of Graeco-Roman Period)**

**Tarneem Bayoumy**

Associate Professor - Faculty of Tourism and Hotels, Matrouh University, Egypt

**Zainab Elsokaily**

Lecturer - Higher Institute of Tourism and Hotels, El Seyouf, Alexandria

### **Abstract**

Throughout history many cultures have used stones, metals and gems as key elements in their religious and spiritual systems as well as decorative items. Among these were the ancient Egyptians who made excellent use of gemstones as early as the predynastic period and continued during the Graeco-Roman period. Gemstones were used primarily in jewelry, amulets and decorative items, besides their religious significance and healing properties. This study focuses on three of the most common gemstones in Ancient Egypt; Lapis Lazuli, Turquoise, and Carnelian. The paper aims at displaying the uses of these three stones, sources, religious contexts and symbolism of their colors in Ancient Egypt, which could help tour guides explain in museums and scenes related. The study starts with a main introduction of gemstones and then it displays these three stones in ancient Egypt in regards to their names in Ancient Egyptian language, and in Greek and Latin,

their uses, sources, religious significance and color symbolism. The study ends with a main conclusion.

**Keywords:** Gemstones, Ancient Egypt, Graeco-Roman period, Lapis Lazuli, Turquoise, Carnelian

### **Introduction**

The gemstones of ancient Egypt are mainly defined by including all rocks, minerals, and materials used in jewelry, amulets, seals, and other small decorative items. They are usually identified on the basis of their macroscopic characteristics like color, glaze, and crystal form (Harrell, 2012). These stones were carved into beads, inlay, amulets, cylinder seals, small vessels, scarabs and small figures, window frames, collars, and amulets (Heywood, 2010). Among the various amulets were the heart, *dd* pillar and *w $\overline{d}$ 3t*. Gemstones were also used as pigment and medicament (Harris, 1961). In the history of the production of precious stones Hellenism was a very important period for setting up direct trade with the very important sources of gems in

North-Eastern Iran, Afghanistan, India, and Ceylon, which meant that its sources of supplies were increased in Egypt during this period. This does not mean, however that the knowledge of gems in earlier times was not considerable (Forbes,1950). Ancient Greek civilization divided gems into males and females according to the depth or lightness of their color (King, 1860). Between the second and the fourth centuries AD many Alexandrian treatises on the magic properties of precious stones were written. Among these are the Orphic poem “on Gems” (λιθικά) (latin De Lapidibus), “about Rivers and Mountains”, “περὶ ποταμῶν καὶ ὄρων ἔπωνυμίας” attributed to Pseudo- Plutarch, the treatise written by Damigeron and Cyranidi attributed to Hermes Trismegistus. The material now maintained in museums of ancient Egyptian gemstones is not fully representative of gemstone use for all periods since most ancient Egyptian tombs were robbed in antiquity and the principal items robbed were metals especially gold and gemstones. Our main source of information of gemstones are tombs mostly royal and elite, also lists of minerals mentioned in the Chester Beatty papyrus, at Edfu and Dendera temples and elsewhere. Harrell identifies 38 gemstones varieties used by the ancient Egyptians (Harrell ,2012). This paper is concerned with three of these gemstones in ancient Egyptian period: Lapis Lazuli, Turquoise, and Carnelian. The reason why these three gemstones were particularly chosen was due to their frequent appearance and their importance proven by their mention in lists and texts as the study will reveal.

### Aims of the study

- Displaying the uses of Lapis Lazuli, Turquoise and Carnelian, their sources, historical background, religious significance, and color symbolism in ancient Egypt.
- Seeking for similarities and development of Lapis Lazuli, Turquoise, and Carnelian in Ancient Egypt in regards to their sources, uses, gods related and symbolism of color.
- Reaching a main conclusion in regards to the previous stones in Ancient Egypt which could help tour guides in their explanation to objects related.

### General words related to gemstones in the Ancient Egyptian Language

*ʿ3t* (wb I, 165/ 13f) includes both metals and semi- precious stones.

*ʿ3t wdḥ* (wb I, 165/21) a term for artificial gemstones

*ḥ3t* (wb III, 360/11-15) is a word for quarry

*ms- ʿ3t* (wb II, 138/9) a word for jeweler or gem-cutter

*nšdy* (wb II, 342/18) meaning worker in precious stones

*ʿr – dhwt* (wb I,208/11- wb II, 342/18) words for small stones and pebbles, it might also be used as a term of all gemstones collected in the form of pebbles

*gmw* (wb V, 169/13) a word used for precious stones

*inr n ḏb3, ḏb3* (wb V, 556/11) meaning to adorn or decorate, so *inr n ḏb3* might mean decorative stone

### Lapis Lazuli

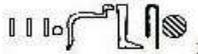
#### Description and Uses

Lapis Lazuli was the most important among Egyptian stones in Ancient Egypt. It is a dark opaque blue phosphate of iron and Aluminum rock (Shaw& Nicholson, 2000). It is depicted as baskets of blue blocks both large and small (Urk IV, 638: 1098). Its

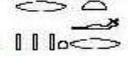
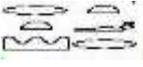
position in offertory lists shows that it was the most valuable of all the semi-precious stones and comes after gold and silver (Shortland & Zakrzewski, 2015). They were carved into beads, inlay, amulets, cylinder seals, small vessels, scarabs and small figures and collars. To improve the sight, one of the remedies in the Ebers Papyrus mentions the combination of Collyrium with incense and real Lapis Lazuli (Cyril, 1930). In the Graeco-Roman Period they were used mainly in producing seals (Museum,2010). Seals carved from semiprecious stones had long been used in Greece, but under the Ptolemaic royal court, gem-carvers produced exceptional works to magnify the monarchy. Lapis Lazuli was also used in Ptolemaic culture in rings and in sculpture (Roman.AD 1-200, Spier, Potts & Cole,2018). Lapis Lazuli is also known for its healing properties. It was used as a cure for eye diseases. The stone was to be washed with cold water before and after the treatment, and could be heated over the eye in order to get rid of all foreign materials. The stone was also supposed to detect poison, to elevate the thoughts towards heaven and for memory enhancement, and to promote virtuousness. Greeks and Romans also used it for serpent bites, circulatory diseases, pregnancy, in the treatment of epilepsy, and skin troubles (Nammu, 2018). The Romans believed that it was an aphrodisiac. The gemstone remains in use today in Crystal healing therapies (History Bytez,2016).

**The designation of Lapis Lazuli in the ancient Egyptian language and in Greek and Latin**

In the Ancient Egyptian language, Lapis

Lazuli was called *hsbd*  (wb III, 334/1-13) which has been accepted as

Lapis Lazuli. Lepsius gives *hsbd* a wide range of meaning including Sapphirus (Cyanus) and Caeruleum (Lepsius, 1877). Probably identical with the Greek κυανος and σαπφειρος and with the Latin Cyanus and Sapphirus ( Richter,2006). Wendel takes *hsbd* as a term for the blue stones in general and Lapis Lazuli in particular (Wendel,1888). *hsbd* was undoubtedly the most highly prized of all the semi-precious stones and regularly follows *nbw* (gold), *hd* (silver) in the enumeration of minerals (Chassinat, 1932).

Also, *tfrr*  as Lapis Lazuli (wb V, 300/2-3), *tfrrt*  (wb V, 300/1) as Lapis Lazuli land. *hsbd m3c* implies that imitation Lapis was also known, and an expression *hsbd iryt* does in fact occur (Harris, 1961). The name Lapis Lazuli which means “blue stone “is derived from the ancient Persian word “Lazhuward” which meant blue (Ahsion& Simmons, 2007). Theophrastus and Pliny the elder described the stone that they called Sapphirus as being dotted with golden spots, but this description refers more to lapis lazuli. It is blue and is only rarely tinged with purple. Lapis Lazuli of the color azurite is regarded as a male variety (PL.,37-119-20, Rickard,2015). Solinus says that when put in the mouth it is colder than other stones (Forbes,1966).

**Historical background**

Lapis Lazuli is well known since the **Predynastic period**, during the Gerzean period there is hardly a cemetery from that period that has not produced Lazuli beads (from Gerza itself in the north to Bahan just south of the first cataract). It was however not in common use at Naqada where out of 2000 graves Lapis Lazuli was only found in two (Payne,1968). The Tôd treasure,

discovered in 1936 in Egypt contains a huge set of raw blocks of Lapis Lazuli and beads. The treasure was found in the basement of a temple dedicated to the worship of Montu, 30 kms south of Luxor (Giudice & Angelici & Re, Alessandro & Gariani, 2016). The silver bracelets of queen Hetepheres from the **Old Kingdom**, 4<sup>th</sup> dynasty was inlaid with Lapis Lazuli, Turquoise, and Carnelian (Harris, 2012, Reisner, 1955). In the **Middle Kingdom**, a collar necklace of silver, gold, faience, carnelian and Lapis Lazuli was discovered in the tomb of Wah from the 12<sup>th</sup> dynasty in Thebes (Girsh & Whitney, 1998). In the **New Kingdom**, 18<sup>th</sup> dynasty The golden sarcophagus of king Tutankhamun is richly inlaid with Lapis Lazuli (Ahsion, & Simmons, 2007). Also, a Lapis Lazuli amulet of Horus was found among the bandages of the mummy of Tutankhamun (Remier, 2010). In the **Ptolemaic Period**, Cleopatra, during her rule, quarantined most of the available Afghan supply because she believed it was a stone that brought her not only eternal life but also eternal power. She had her palace walls inlaid in the royal blue stone (Lapis Lazuli is the reason we have the concept of “royal” blue color today). She even ground Lapis into a powder and lined her eyelids with it, symbolizing her truth and power (Perrakis, 2019).

### Sources

The principal ancient source of Lapis Lazuli seems to have been the region of Badakhshan in northeastern Afghanistan where four ancient quarries have so far been identified (Shaw & Nicholson, 2000). Also, neighboring areas in Pakistan is possible (Harrell, 2012). This represents one of the earliest examples identified of a long-distance transport of materials in the ancient world (Shortland & Zakrzewski, 2015).

Lapis Lazuli was brought also to Egypt as tribute from various localities like Assur, Babylon, Syria, Cyprus and others (Urk IV, 668; 669, Urk IV 668;701, Urk IV, 669; 688 ; 744 , Urk IV, 708 respectively). *hsbd nfr n bbr* , *hsbd n tfrr* were probably names of trading stations of Lapis Lazuli on the route from Badakhshan (Harris, 1961). Poseidippos of Pella (310-240B.C.) was a Greek poet resident in Alexandria in the third century B.C, he refers to Lapis Lazuli as of Persian origin (Maris, 2016). Badakhshan seemed to have been also the main exploited source of the mineral in the **Graeco-Roman Period**. The treasury at the Hellenistic city Ai Khanoum contained around 75 kilograms of rough blocks of Lapis at the time of its desertion (Mairs, 2014). By the Hellenistic period the time of Poseidippos, immigrated Greeks were involved in its large-scale extraction and its long -distance transportation from origin (Mairs, 2016).

### Religious contexts

Gods were described as having bones of silver, skin of gold and eyelids and brows of true Lapis Lazuli. The emphasis on this material was an evidence of its great value (Teeter, 2011). In the story of the destruction of mankind, **Ra** is said to have hair of Lapis Lazuli, also the God **Amun** is often shown with skin the color of Lapis Lazuli (Remier, 2010). Lapis Lazuli was mentioned several times in the Book of the Dead; chapter CLXXV (the remains of a much longer version of this chapter has been found in the papyrus of a scribe of the offerings of the king of the north and south). From the rubric it is understood that this chapter was to be recited over a figure of **Horus** made of Lapis Lazuli which was to be put upon the neck of the deceased, such ceremony was believed to be most effective in securing important benefits for the dead (

Budge, 2018). An extract from the book of the dead, papyrus of Nebseni, found at Memphis “ your visage is covered with gold and Horus has inlaid it with Lapis Lazuli “ (Faulkner, 1991). From chapters of praising which are made in the god’s domain “ your upper part is Lapis Lazuli, your hair is bestrewn with Lapis Lazuli, your visage is covered with gold and Horus has inlaid it with Lapis Lazuli, your eyebrows are the two sisterly serpents and Horus has inlaid them with Lapis Lazuli, your eyelashes are firm everyday being colored with real Lapis Lazuli, your breasts are eggs of carnelian which Horus has inlaid with Lapis Lazuli (Dassow, 2008). In the Egyptian Book of the dead, Lapis Lazuli in the shape of an eye amulet is thought to have enormous power. In the Book of the dead, spell 26 is entitled “ *r n ib n ḥsbd* “, of heart of Lapis Lazuli, which is found on a papyrus from the 19<sup>th</sup> dynasty in Berlin, “ *ib* “ indicates not the actual heart amulet but the heart scarab (Harris, 1961). In the Greco-Roman Period Lapis Lazuli was considered sacred to **Aphrodite**, the name of the gemstone used in Aphrodite’s secret name (ΑΡΩΡΙΦΡΑΣΙΣ) is a symbol of the celestial character of Aphrodite Ourania (Waegeman, 1991). Lapis Lazuli when engraved with an image of the goddess and placed above the eye of a wryneck (a bird of madness associated with her) and set in a ring, talisman would attract the attentions of the opposite sex (Lovano, 2019). Lapis Lazuli honors **Athena** (Ἀθηνῆ) she is the Greek Goddess of war and Wisdom. Athena’s throne was made of silver and her eyes of lapis lazuli (Molloy, 2017). There was also a violet crown made out of blue lapis lazuli set atop the throne. **Hera** (Ἥρα) was the Greek Goddess of Marriage and the Queen of all Gods and Goddesses on

Mountain Olympus. She was the wife of Zeus (Ζεύς). Her gem is also the Lapis Lazuli which helps promote honesty and open communication (Stein, 2013).

### Symbolism of Color

The most effective natural elements in the lives of the ancient Egyptians: the sky and the Nile are blue in color, symbolizing inundation and supernaturalism (Foroughi & Javadi, & Nazar, 2017). Also the ceilings of New Kingdom royal tombs are dark blue symbolizing primarily the night sky (Banes, 1985), Sign of the sky thus place of Ra. Also, *ḥꜥpi*’s skin color is blue. In the Graeco-Roman Period Lapis Lazuli was the symbol of royalty and honor, gods and power, spirit and vision. It was also thought of as a symbol of the starry heavens and as a defense against the evil eye. It is also a symbol of heavenly protection or air. In the book of Revelation, sapphire (or Lapis Lazuli) is among the Foundations of the Holy Jerusalem (Becker, 2000). The stone had a great importance in Christianity especially because it was in particular known for encouraging fidelity (Sessin, 2014).

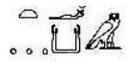
### Turquoise

#### Description and uses

Turquoise is an opaque phosphate of Aluminum, its color ranges from light to medium green to greenish blue or light blue with the blue color fading overtime to green due to dehydration (Harrell, 2012). Turquoise derives its sky-blue color from traces of copper. Its name might have been derived from the old French “torques” in reference to Turkey or it might refer to the Persian word “Piruzen” (Clark, 1986). In the **Graeco-Roman period**, it was supposed to protect travelers on their way, it was also believed to improve eyesight and to help in communication (Neva, 2007). Pliny described Turquoise as follows: “Next to the

Topazios in appearance though not same value comes the Callaina, of a pale yellow mixed with green”. The Callaina is supposed to be a variety of the Topazios, those of the deepest green are naturally the most valued. Such a distinction made the Greek mineralogists judging by the eye and classifying the Topazios deep green and Callaina, yellowish green under different species (Bayley,2006). Greeks believed turquoise stones pressed to the eyes could improve eyesight. Turquoise of opaque greenish or sky blue color, does not appear in ancient intaglios, but was occasionally used for cameos and for works in the round in the Augustan period (Richer,2006). Greek physician, Trallianos (6<sup>th</sup> AD) mentions a remedy for epilepsy in relation to Turquoise, “ wear on your finger a jasper shining blue green like turquoise and you will be cured from the disease” ( Lowry,2010).

### Designation of Turquoise in the Ancient Egyptian Language, Greek and Latin

Turquoise was called *mfk3t*  (wb , II/56.13),  (wb, II, /57.8). *w3d n b3h* which has been interpreted as an alternative name of *mfk3t* apparently is a variant of the latter in the Dendarah attribute tables where *b3h* produced *mfk3t* referring probably to Sinai (Harris, 1961, wb, I/267.3-8 & 9-15). *w3d* is also seen as a term which represents any green stone or green mineral referring particularly to malachite (Iverson,1955). The Egyptian goddess Hathor as a form of the earth mother was the mistress of the mines of Turquoise *nbt mfk3t* (wb, II/56, Robbins, 2008). Turquoise in Greek is *καλλαινος* and in Latin is **Callaina**.

### Sources and Historical Background

Turquoise in ancient Egypt was obtained from Sinai. It was found in this area between a layer of limestone and a layer of sandstone. It was obtained as early as the 1<sup>st</sup> **dynasty** from the quarry of Wadi Magharah, since four bracelets of Turquoise were discovered in the tomb of king *dr* from the 1<sup>st</sup> dynasty (عبد الفتاح, ٢٠٠٠). From the **Third Dynasty**, missions to the mines recorded commemorative inscriptions there. Kings Sanakht and Zoser were among the first kings who left inscriptions there. Since the early years of the **Middle Kingdom**, Ancient Egyptians started to send mining missions to exploit the turquoise mines in Serabit El-Khadem in South Sinai. They also built a temple for Goddess Hathor (Goddess of turquoise), the temple of Serabit El-Khadem. The oldest inscriptions found in Serabit-El-Khadem confirmed that the mining campaigns began in the Middle Kingdom and King Senusret I was the First King to send missions there (فخري ١٩٨٢).

Also, a possible source in ancient Egypt is at Bir Nasib copper mine (Harrell, 2012). In the **Graeco-Roman period** It seems that Turquoise native country was the region to the north of India, amongst the tribes of mount Caucasus, the Phycari, Dahae and Sacae (little Bokhara) (N.H.,XXXVII,110-12). The Callaina original and finest kind was considered characteristic to the island of the red sea, where it had been first discovered (Topazios).

### Religious contexts

Turquoise was mentioned several times in the Book of the dead, in spell 109 “ twin sycamore of turquoise “ are mentioned where the sun god **Ra** passes between them every morning ( in the Papyrus of Nu no. 10,477.sheet 12 in the British Museum, Jasnow, & Zauzich, 2005, Budge,2013).The

New Kingdom sources mentions Turquoise as a characteristic of the morning world, and in certain hymns the sun is said to strew the sky with turquoise (Janseen, 1961, Sauneron, 1953). In the last hour of the *Imy-dw3t*, just before day break, a group of 12 gods believed to be the “Turquoise ones” “*mfk3tyw*” praising the sun gods arising at dawn (Borghouts, 2007). A traditional epithet of **Minerva**, the Greek goddess of wisdom “was the blue-eyed maid” (Bayley, 2006).

### Symbolism of Color

Turquoise in Ancient Egypt symbolized the color of new vegetation, growth, fertility, and resurrection, thus the color of joy and delight (Mendoza, 2017). It was thought as color associated with **Osiris**. In the Greco-Roman period Turquoise symbolized purity and virginity, it indicated dignity and wealth (Bayley, 2006).

### Carnelian

#### Description and uses

Carnelian is a translucent red chalcedony which owes its color to the presence of small amounts of iron oxide, although the ideal tint is an orange-red, all shades from pale to dark are known. At the beginning, the ancient Egyptians seemed to have regarded all these varieties as one (Harris, 1961). Carnelian occurs among the 24 *3t* at Dendarah and in many other lists of minerals and miscellaneous tribute (Wendel, 1888). Its name derives from the Latin “Carnes”, which means “flesh” probably because of its red color. Another name of carnelian is “cornelian” perhaps derived from the Latin word *Cornus* meaning “dogwood berry”. Carnelian is very similar to Sard and Sardonyx (Simon, 2015). According to Pliny the Elder, sarda (family stone of carnelian) derived its name from the city of “Sardis” in Lydia from which it came, and according to others, may be

related to the Persian word “Sered”, meaning yellowish red (Chisholm & Hugh, 1911). Theophrastus mentions that one type of Sardonyx, which is translucent and of a redder color, is called the female, and the other which is translucent and darker, is called a male. (Forbes, 1963). The stone was popular in ancient Greece and Rome, where it was used for cameos, signet rings, and intaglios (Hurrell & Johnson, 2016). Carnelian is used in all periods, from Minoan to Roman, and perhaps half of all known gems are in this material (Spier, 1992). The Ancient Romans considered the carnelian stone as a luck-bringer and a symbol of courage and power. Ancient Greeks also used carnelian for its spiritual and healing powers, associating it with courage, inspiration, and ambition, confidence, self-realization, and motivation. Used as protection against negative powers and energies, and worn individually to bring luck, hope and physical energy (Simon, 2015). Carnelian also used with other stones in making seals and it was employed as signatures on documents and to seal pots, chests, doors. The style of the massive gold and carnelian rings is particularly characteristic of Hellenistic Egypt (Wight & Lapatin, 2010). In the 4<sup>th</sup> century B.C. Carnelian was also famous gem used in Greek glyptic art representing Alexander, Holding a thunderbolt in his left hand and a sheathed sword in his right hand (Heckel & Tritle, 2009). Carnelian was used as a talisman for protection (Morgan, 2008). Carnelian was believed to protect eyesight, safeguard home and bring happiness and prosperity (Neva, 2007). Ancient Greeks used carnelian to ease nervousness and treat fevers (Olick, 2013).

### Designation in the ancient Egyptian language, in Greek and Latin

It was known in the Ancient Egyptian

language by *hrst*  (wb, III, 150/9-15). Lepsius notes there are two kinds of *hrst*, one is white quartz: *hrst hd*, while the other is red quartz and perhaps Carnelian *hrst dšr* which was more valued (Lepsius, 1877). *wb3 hrst* is the boring of Carnelian (Harris, 1961). Direct evidence for the identification of *hrst* as Carnelian is proved by the Berlin amulet board (Berlin 20 600) where *hrst* is the label beside two objects, a *w3t* eye and a bead which are in fact carnelian (Harris, 1961). Of the *w3t* eyes cited by Petrie, no fewer than 32 are either Carnelian or Sard (Petrie, 1934). In Greek *σάρδιον* and in Latin **Sardius**.

### Historical background

It has been used since the **Predynastic period** in making beads and amulets then starting from the **4<sup>th</sup> dynasty** in furniture inlay, jewelry and coffins. There was a discovery of more than 2000 Carnelian beads arranged around the perimeter of two boats associated with Raneferef from the **5<sup>th</sup> dynasty** (Van dijk, 1997). Carnelian is shown in the beads from the tomb of princess *nfrw pth*, from the **12<sup>th</sup> dynasty** south of the tomb of her father Amenemhat III in Hawara. Also, in the **18<sup>th</sup> dynasty** funerary furniture of Tuya, coffin of Smenkhkare and in funerary furniture of Tutankhamun. (عبد الفتاح، ٢٠٠٠)

### Sources

One mine at Stela Ridge near Gebel el Asr, principally for Carnelian and Sard, was mainly used in the **Middle Kingdom** but also traces from the **Old Kingdom** (Harrell,2012). It was also obtained from Kush and other localities in Nubia, as well as from *b3 imnty* the region round Elephantine (Wendel, 1888). The Romans imported into Egypt many gems like

carnelian from Sogdiana, Crete and India (Harrell,2008).

### Religious contexts

In ancient Egypt, it appears as the material for decans, the forepart of a lion and a temple (De Buck, 1985). Among the names of Hathor as Isis-Hathor is “ lady of faience in place of Carnelian “ ( Harris, 1961).Carnelian was mentioned in the Book of the dead, in chapter CLVI in the Papyrus of Nu no. 10,477.sheet 27 in the British Museum, the chapter of a buckle of Carnelian, rubric should be said over a buckle of Carnelian which has been steeped in water of flowers and set (3) in a plinth of sycamore wood and it shall be placed at the neck of the deceased on the day of the funeral ( Budge, 2018). It gave the deceased the protection of the blood of Isis, and the strength and the power of her words. it caused Horus to rejoice when he saw him, one hand of the deceased would be towards heaven and the other towards earth (Romer, 2008). In the Book of the dead chapter 108, “Sobek lord of *b3hw* is on the east side of the mountain, his house of Carnelian “(Borghout, 1973). In ancient Greek mythology Carnelian was associated with **Daedalus** the Greek mythological craftsman, there is an Etruscan depiction of Daedalus building wings on a carnelian gem from the 4<sup>th</sup> century B.C.(Ambrosini,2014). In ancient Roman mythology Rubies as with all red stones such as Carnelian, spinel, garnet, blood stones etc. were always thought to have an association with the planet Mars and so the god, and therefore with the feelings of anger, competitiveness and passion (Wight & Lapatin, 2010). Carnelian was associated also with **Mercury god** of trade and luck and **Venus goddess** of beauty and fertility (Neva,2007).

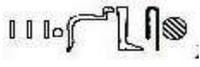
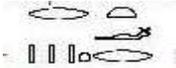
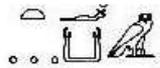
### Symbolism of Color

Carnelian because of its red color was associated with the sun god **Re**, the presence of Carnelian beads might represent the circuit of the sun. Carnelian is also the symbol of destructive violence, often associated with the fire of the gods (Van dijk 1997). Also, the red of Carnelian resembled the red of blood implying life, strength and vigor (Peck, 2013). Also, as a

color associated with **Sekhmet** with a red dress and a red disc on her head. In the Graeco-Roman period, in general all red stones like carnelian were associated with feelings of anger, they were associated also with passion, but at the same time they were also thought to have a positive effect in calming rage (Wight & Lapatin, 2010).

**Discussion and Analysis**

**Table 1 Displaying the Three Stones in Ancient Egypt according to previous study**

	Lapis Lazuli	Turquoise	Carnelian
<b>1- Name in Ancient Egyptian Language/ Greek /Latin</b>	<p><b>Ancient Egyptian:</b></p> <p><i>hsbd</i></p>  <p><i>tjrr</i></p>  <p><b>Greek:</b> κυανος and σαπφειρος</p> <p><b>Latin:</b> Cyanus and Sapphirus</p>	<p><b>Ancient Egyptian:</b></p> <p><i>mfk3t</i></p>  <p><b>Greek:</b> καλλαινος</p> <p><b>Latin:</b> Callaina</p>	<p><b>Ancient Egyptian:</b></p> <p><i>hrst</i></p>  <p><b>Greek:</b> σαρδιον</p> <p><b>Latin:</b> Sardius</p>
<b>2- Date (first mention)</b>	<p>Since the Predynastic Period</p>	<p>Since the 1<sup>st</sup> dynasty</p>	<p>Since the Predynastic Period</p>
<b>3- Uses</b>	<p><b>Ancient Egypt:</b></p> <p>in beads, inlay, amulets, cylinder seals, small vessels, scarabs, small figures</p>	<p><b>Ancient Egypt:</b></p> <p>In jewelry</p>	<p><b>Ancient Egypt:</b></p> <p>In beads, collars, rings, amulets, inlays</p> <p><b>Graeco-Roman:</b> used for cameos, signet,</p>

	<p>and collars. to improve the sight, one of the remedies in the Ebers Papyrus</p> <p><b>Graeco-Roman:</b> in producing seals in rings and in sculpture, used as a cure for eye diseases, to detect poison, to elevate the thoughts towards the heavens, and to promote virtuousness. for serpent bites, circulatory diseases, pregnancy, in the treatment of epilepsy, and skin.</p>	<p><b>Graeco-Roman:</b> in jewelry, Greeks believed turquoise stones pressed to the eyes could improve eyesight. It was occasionally used for cameos and for works in the round in the Augustan period, also as a remedy for epilepsy.</p>	<p>rings, and intaglios, as a luck-bringer protection against negative powers and energies, to bring luck, hope and physical energy ,used in Greek glyptic art , as a talisman for protection ,to give the wearer courage in battle and help timid speakers become both eloquent and bold ,was believed to protect eyesight, safeguard home and bring happiness and prosperity ,to ease nervousness and treat fevers .</p>
4- Source	<p><b>Ancient Egypt:</b></p> <p>Badakhshan (Afghanistan), also possible Pakistan.</p> <p><b>Graeco-Roman:</b> Badakhshan, Persia</p>	<p><b>Ancient Egypt:</b></p> <p>Sinai, in Wadi Magharah, Serabet el Khadem, and possible Bir Nasib.</p> <p><b>Graeco-Roman:</b> Besides the local quarries, imported from north India and island of the red sea</p>	<p><b>Ancient Egypt:</b></p> <p>Stela Ridge near Gebel Asr, also Kush and other localities in Nubia, as well as from 't3 imnty the region round Elephantine.</p> <p><b>Graeco-Roman:</b> from Sogdiana, Crete and India</p>
5- Gods related	<p><b>Ancient Egypt:</b> Ra, hꜥpi , Amun and Horus</p> <p><b>Graeco-Roman:</b> Aphrodite, Athena, Hera</p>	<p><b>Ancient Egypt:</b> Hathor, Osiris (as of green), Anubis (as of green), and Ra</p> <p><b>Graeco-Roman</b></p>	<p><b>Ancient Egypt:</b> Isis-Hathor, Ra, Sekhmet, Seth and Sobek</p> <p><b>Graeco-Roman:</b> <b>Daedalus</b> the Greek mythological craftsman, <b>Mercury</b> god of trade and luck and <b>Venus</b> goddess of</p>

		Minerva	beauty and fertility
<b>6- Symbolism of color of stone</b>	<p><b>Ancient Egypt:</b> symbolizing inundation and supernaturalism and night sky.</p> <p><b>Graeco-Roman:</b> Symbolizing royalty honor, power, spirit and vision. a symbol of the starry heavens and as a defense against the evil eye. encouraging chastity and fidelity.</p>	<p><b>Ancient Egypt:</b> Turquoise symbolized the color of new; vegetation, fertility, and resurrection, thus the color of joy and delight.</p> <p><b>Graeco-Roman:</b> symbolized purity and virginity, it indicated dignity and wealth</p>	<p><b>Ancient Egypt:</b> destructive and violence, often associated with fire. Resembled the red of blood implying life, strength and vigor.</p> <p><b>Graeco-Roman:</b> a symbol of courage and power. spiritual and healing powers, associating it with courage, inspiration, and ambition, confidence, self-realization, and motivation.</p>

**Commentary**

- The table shows that the three stones appeared quite early in Ancient Egypt where Lapis Lazuli and Carnelian appeared since the Predynastic Period and Turquoise in the 1<sup>st</sup> dynasty.
- In relation to their sources in Ancient Egypt, two of which (Turquoise and Carnelian) are of local quarries while the 3<sup>rd</sup> (Lapis Lazuli) is of foreign origin (Afghanistan).
- The three stones were mentioned in religious books like the Book of the Dead having certain powers, all three stones are related to the god Ra in Ancient Egypt. Lapis Lazuli associated with Ra in regards to the color of the sky, the house of Ra, also Ra has hair of Lapis Lazuli in the story of destruction of mankind. Turquoise is

- associated with Ra where he passes through two Sycamore trees every morning, also at dawn. Carnelian is associated with Ra by representing the color of the circuit of the sun.
- The main source of Lapis Lazuli was the same through Ancient Egypt which was Badakhshan (Afghanistan), also the mention of Pakistan. Persia was mentioned (Graeco-Roman period).
- Gods related to Lapis Lazuli in Ancient Egypt were Ra, Amun, Horus and *h<sup>c</sup>pi* all are male gods while the gods related to the stone in the Graeco-Roman period were all female goddesses: Aphrodite, Athena and Hera.
- Lapis Lazuli symbolizes inundation and supernaturalism and night sky, in the Graeco-Roman, it symbolizes royalty,

honor, power, spirit, vision, starry heavens and as a defense against the evil eye and encouraging chastity and fidelity. Symbol in common is sky and heaven.

- Concerning the uses of Lapis Lazuli, it was generally used in jewelry, with the increase of its use in seals and sculpture in the Greco-Roman period. In regards to its healing properties Lapis Lazuli was used as a cure for eye diseases. Its use in Graeco-Roman period extended to serpent bites, circulatory diseases, pregnancy, in the treatment of epilepsy, circulatory diseases skin troubles and memory enhancement.

- Concerning the source of Turquoise in Ancient Egypt, Sinai was the main source and in the Graeco-Roman period, besides the local quarries, Turquoise was exported among the gemstones from India and island of the red sea. Same for Carnelian in the sense of exporting besides local quarries.

- The symbolism of the color of the stone of Carnelian is somehow different through Ancient Egypt, it has more of a bad side by being symbol of destructive power and fire before the Graeco-Roman Period, while in the Greco-Roman it is more of a good side by being symbol of courage, ambition and confidence.

- The *wꜥꜣt* eye amulet is common in Lapis Lazuli and Carnelian in Ancient Egypt.

### Conclusion

In Ancient Egypt, many gemstones were known, the most important were three stones: Lapis Lazuli, Turquoise and

Carnelian. These three stones were known as early as the Predynastic and Dynastic periods, two of which were quarried from local quarries (Turquoise, Carnelian), while Lapis Lazuli was quarried from Afghanistan. In the Graeco-Roman period more quarries were known from outside of Egypt. The three stones were used mainly in jewelry, inlays besides their healing properties that became clearer in the Greco-Roman period. These stones were mentioned in religious contexts and related to gods; Lapis Lazuli was related to Ra, Horus, Amun, *hꜥpi*, Aphrodite, Athena, and Hera. Turquoise was associated with Hathor, Anubis, Osiris, Ra and Minerva. Carnelian was associated with Ra, Sekhmet, Seth, Sobek, Mercury god, Daedalus, and Venus. The color of these stones had certain symbolism: Blue of Lapis Lazuli symbolized inundation and supernaturalism, royalty, honor, power, spirit vision and starry heavens. Blue-green of Turquoise symbolized the color of new vegetation, fertility, resurrection, and in the Greco-Roman it has symbolized purity, virginity, indicated dignity and wealth. Carnelian in Ancient Egypt was a symbol of destruction, violence, often associated with fire, implying life, strength and vigor., and in the Greco-Roman period: a symbol of courage, power, spiritual and healing powers, inspiration, ambition, confidence, self-realization, and motivation. This study could help tour guides explain in Museums jewelry and items in relation to these three stones.

Plates



**Plate 1**  
Carnelian bead - manufacturing , Dynasty 18,  
from tomb of Sobekhotep at Thebes  
(Harrell , 2012)



**Plate 2**  
Necklace with beads of Lapis Lazuli, Carnelian,  
Turquoise and others , Dynasty 12 , from tomb of  
princess Sithathoryunet at EL Lahun (MMA  
16.1.3)([https://metmuseum.org/art/collection/search/  
544232](https://metmuseum.org/art/collection/search/544232))



**Plate 3**  
Carnelian bead manufacturing, tomb of Aba, Deir  
el-Gebrawi, Dynasty 6(Harrell, 2012)



Carnelian Oval gem with Zeus Serapis Museum of  
Fine Art Boston  
<https://collections.mfa.org/internal/media/dispatcher/1363216/resize%3Aformat%3Dfull;jsessionid=-816C95C4251EEA49C3285383DCD16EC2>



Greek Carnelian intaglio ring of Alexander the  
Great  
<https://i.pinimg.com/originals/78/b5/85/78b585fb7ca38f540a583a6ce28e3c4b.png>

References

- Ahsion, Naisha, & Simmons, Robert, (2007), *The Book of the Stones: Who they are and What they teach*. Berkley, CA: North Atlantic Books.
- Ambrosini Loura, (2014) “Image of Artisans on Etruscan and Italic Gem”, *Etruscan Studies*,17(2): 172-191.
- Banes, John, (1985), *Color Terminology and Color Classification: Ancient Egyptian Color Terminology and Polychromy*, Oxford. <https://doi.org/10.1525/aa.1985.87.2.02a00030>
- Bayley Harold, (2006) *The Lost Language of Symbolism*, Dover Publication, Mineola United States of America.
- Becker Udo, (2000), *The Continuum Encyclopedia of Symbols*, Trans. W Carmer, Continuum New York-London.
- Borghouts, Joris, (2007), *Book of the Dead (39) from Shouting the Structure*. Wiesbaden, Harrassowitz Verlag
- Borghouts, Joris, (1973), “The evil eye of Apopis“, *JEA*,59: 114–150.
- Budge, Wallis, E., (2018), *Revival, Book of the dead (1901), an English translation of the chapters, hymns*. London, Kegan Paul, Trench, Trübner.
- Budge, Wallis., E., (2013), *The Gods of the Egyptians*. Courier Corporation
- Caley Earler, Richards John F.C., (1956), *Theophrastus on Stones, Introductions, Greek Text, English Translation and Commentary*, Columbus, Ohio, The Ohio State University.
- Chassinat, Emile, (1932), *Le Temple d’Edfou, vol. II*, Le Caire. Imprimerie d’ IFAO. ‘
- Clark., Grahame, (1986), *Symbols of Excellence: Precious Materials as Expressions of Status*. Cambridge [Cambridgeshire], Cambridge University Press.
- Cole Sara E., (2018), *Beyond the Nile: Egypt and The Classical World*. J. Paul Getty Museum, Los Angeles.
- Cyril, P., Bryan (1930), *Ancient Egyptian Medicine, The Papyrus Ebers*, Ares publishers Inc. London.
- Dassow, Eva, V., (2008), *The Egyptian Book of the Dead: The Book of Going Forth by day – The Complete Papyrus of Ani Featuring Integrated Text and full color images*.
- De Buck, Adrian, (1985), *The Egyptian Coffin texts II, Texts of Spells 76-163*, Oriental Institute Publications, Chicago 1935-1956.
- Faulkner, Raymond, O., (1991), *A Concise Dictionary of Middle Egyptian*. Oxford. Griffith Institute.
- Forbes Robert Jacobus, (1950), *Metallurgy in Antiquity: A Notebook for Archaeologists and Technologists*, Leiden, <https://doi.org/10.2307/297533>,
- Forbes Robert Jacobus, (1966) *Studies in Ancient Technology*, 2<sup>nd</sup> ed., Vol.III, Leiden.
- Foroughi, Mahda&Javadi, Shohreh& Nazar,Bagh (2017), “ Examining the Symbolic Meaning of Colors in Ancient Egyptian Painting and their Origin in Environment” in *the Scientific Journal of Nazar Research Center for Art , Architecture & Urbanism*, 14(52), pp.69-80.
- Gagarin Michael, Fantham Elaine (2010), *The Oxford Encyclopedia of Ancient Greece and Rome*, VOL.1, Academy Bible, Oxford University Press.
- Geller Markham.J. Geller, (2008), *Melammu: The Ancient World in an Age of Globalization*, Max Planck Research Library for The History and Development of Knowledge.
- Girsh, Barry, & Whitney Watts, E., (1998), *Art of Ancient Egypt: A Resource for Educators*.
- Giudice, Alessandro, & Angelici, Debora& Re, Alessandro & Gariani , Gianluca ( 2016), Protocol for Lapis Lazuli Provenance Determination : Evidence for an Afghan Origin of the stones used for Ancient Carved Artefacts kept at the Egyptian Museum of Florence , *Archaeological and Anthropological Sciences* 9.
- Harrell, James, (2012), “Gemstones“, *UCLA encyclopedia of Egyptology*.pp.1-23
- Harrell James A., (2008), *Stone in Ancient Egypt*, Encyclopedia of the History of Science, Technology, and Medicine in Non-Western Cultures, Springer, Dordrecht.
- Harris, James, & Lucas, A., (2012), *Ancient Egyptian Materials and Industries*. Courier Corporation.
- Harris, James, (1961), *Lexicographical Studies in Ancient Egyptian Minerals*. Berlin: Akademie Verlag.
- Heckel, Waldermar, Müller Sabine,Wrightson Graham,(2015), *The Many Faces War In The*

- Ancient World*, Cambridge Scholars Publication.
- Heckel , Waldemar, Tritle Lawrence A., (2009), *Alexander the Great, A New History*, Black Well Publishing.
  - Heywood, Ann, (2010), *Ultramarine Pigments in Ancient Egypt, Metropolitan Musuem Studies in Art, Science, and Technology VI*.
  - Hurrell Karen, Johnson Mary L., (2016), *Gemstones: A Complete Color Reference for Precious and Semiprecious Stones of The World*, Chartwell Books.
  - Iverson, Erik, (1955), *Some Ancient Egyptian Paints and Pigments: A Lexicographical Study*. [http://www.royalacademy.dk/Publications/Low/617\\_Iversen,%20Erik.pdf](http://www.royalacademy.dk/Publications/Low/617_Iversen,%20Erik.pdf)
  - Janseen, Jacobus, J., (1961), Two Ancient Egyptian Ship's Logs: Papyrus Leiden I, 350.
  - Jasnow, Richard & Zauzich, Theodor (2005), *The Ancient Egyptian Book of Thoth*. Harrassowitz Verlag.
  - King R.C.W., (1860), *Antique Gems: Their Origin, Uses and Value, As Interpreters of Ancient History; And as Illustrative Of Ancient Art: With Hints To Gem Collectors*, London: John Alliltuay.
  - Lepsius, Richard, (1877), *Les Mataux dans les inscriptions Egyptiennes*. Paris.
  - Lovano Michael (2019). *The World of Ancient Greece: A Daily Life Encyclopedia [2 volumes]*. Retrieved from <http://publisher.abc-clio.com/9781440837319>
  - Lowry Joe Dan, (2010), *Turquoise: The World Story of a Fascinating Gemstone*, Gibbs Smith Publication.
  - Maris Rachel, (2016), *Lapis Lazuli, Homer and the Buddha, Material and Ideological Exchange in West Asia (250-200CE)*, Routledge Publication, London.
  - Mendoza, Barbara, (2017) *Artifacts from Ancient Egypt*. ABC-CLIO, 2017.
  - Molloy, Michael, (2017), *The Christian Experience: An Introduction to Christianity*, Bloomsbury, Press.
  - Morgan Diane, (2008), *Gemlore Ancient Secrets and Modern Myths from The Stone Age to the Rock Age*, Green wood Press.
  - Olick Lexa, (2013), *Witchy Crafts: 60 Enchanted Projects for Creative Witch*, Llewellyn Worldwide Publication, Ltd.
  - Payne, Joan, C., (1968), "Lapis Lazuli in early Egypt ". In *JSTOR vol. 30*, no.1, pp.58-61. British Institute of the Study of Iraq.
  - Peck, William, H., (2013), *The Material World of Ancient Egypt*. Cambridge University Press. <https://doi.org/10.1017/CBO9781139034296>
  - Perrakis Athena, (2019), *Crystal Lore, Legends & Myths: The Fascinating History of the World's Most Powerful Gems and Stones*, Fair Winds Press.
  - Petrie, Flinders, W., M., (2006), *Amulets*, London. - Richter G.M.A., *Catalogue of Engraved Gems, Greek, Etruscan and Roman*, Published for The Museum by L'Erma Di Bretschneider, Roma.
  - Reisner, George, A. & Smith, Stevenson, W., (1955), *History of the Giza Necropolis II, The Tomb of Hetep-heres, the Mother of Cheops*. Harvard University Press. Cambridge.
  - Remler, Pat, (2010), *Egyptian Mythology A to Z*. Chelsea House Pub; 3rd edition.
  - Rickard David, (2015) *Pyrite: A Natural History of Fool's Gold*, Oxford University Press.
  - Robbins, Gay, (2008), *The Art of Ancient Egypt*. London: British Museum.
  - Romer, John, (2008), *The Egyptian Book of the Dead*. Sessin S., *Gem in Material Renaissance Culture*, Master Thesis, University of London, 2014.
  - Sauneron, Serge (1953), "L'hymne au Soleil levant des Papyrus de Berlin 3050, 3056 et 3048" in *BIFAO* 53: 65-90.
  - Shaw, Ian & Nicholson, Paul, T., (2000), *Ancient Egyptian Materials and Technology*. Cambridge University Press.
  - Simone Clare, (2015), *Carnelian Stone Meaning & Short History*, Accessgems.com.
  - Spier Jeffrey, (1992), *Ancient Gems and Finger Rings, Catalogue of the Collections*, The J. Paul Getty Museum, Malibu- California.
  - Stein, Diane, (2013), *Healing With Flower and Gemstone Essences, Essential Reiki: A Complete Guide to an Ancient Healing Art*, Lotus Press.
  - Subedi Bahagawan, (2009) *Characterization of Turquoise Gemstone by Thermoluminescence (TL)*, Master Thesis, Department of Physics, Aristotle University of Thessaloniki, Greece.
  - Teeter, Emily, (2011), *Religion and Ritual in Ancient Egypt*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511780462>

- Van Dijk, J., (1997), *Essays on Ancient Egypt: in honor of Herman Te Velde, Egyptological Memoirs, vol.1*. Groningen: Styx, Netherlands.
- Waegeman Maryse, (1991) ΑΡΩΡΙΦΡΑΣΙΣ: Aphrodite's Magical Name, *Acta Classica XXXIV*, Universitatis Scientiarum debreceniensis.
- Welan B.M, Sutton T., (2017), *The Complete Color Harmony Pantone Edition: Expert Color Information for Professional Results*, Quarto Publication Group.
- Wendel, Peter (1888), *Über die in Altägyptischen Texten erwähnten Bea- und Edelsteine*. Leipzig.
- Wight Karol, Lapatin Keneth, (2010), *The J. Paul Getty Museum, Handbook of The Antiquities Collection*, Getty Publication.
- Zakrzewski, S., Shortland, A., & Rowland, J. (2015). *Science in the Study of Ancient Egypt*. (Routledge Studies in Egyptology). Routledge. <https://doi.org/10.4324/9781315678696>

## المراجع العربية

- أمينة عبد الفتاح محمد السوداني ، (٢٠٠٠) المناجم و المحاجر في مصر القديمة (منذ بداية الدولة القديمة و حتى نهاية الدولة الحديثة ، رسالة دكتوراة غير منشورة ، جامعة طنطا.
- أحمد فخري و أخرون ، (١٩٨٢) موسوعة سيناء ، الهيئة المصرية العامة للكتاب