

The Crocodile Cache of Hamra Dom in Qena, Egypt

Zainab Abd Eltwab Riyad Khamis

Faculty of Archaeology- Aswan University, Egypt

Email: *nfrtkmt77@yahoo.com*

ORCID iD Link: *<https://orcid.org/0000-0002-3259-8743>*

Received: 21/04/2026 Accepted: 20/06/2026 Published: 30/06/2026

Abstract: Recent archaeological discoveries at Hamra Dom (Qena, El-Tariff Mountain) reveal evidence of crocodile worship like that known from Kom Ombo in Upper Egypt and the Fayum region. This study seeks to address several key questions regarding these findings: where were these crocodiles bred? Were they raised as part of a local crocodile cult in a systematic manner, or did they serve another purpose? Were they votive offerings, or did their burial have a different significance? The article also examines the archaeological evidence for the presence of crocodiles in an otherwise dry environment, explores the reasons for their mummification, and outlines the methods used in the mummification process. Finally, it compares the recently discovered crocodile cache at Hamra Dom with the extensive collections of crocodile mummies found in other cemeteries throughout the Fayum and Kom Ombo regions.

Keywords: Crocodile; Sobek; the cache; Qena; Faiyum; Kom Ombo.

The Crocodile Cache of Hamra Dom in Qena, Egypt

الملخص:

كشفت التنقيبات الأثرية الحديثة في حمرا دوم (قنا، جبل الطارف) عن خبئة اشتملت على عدد من موميאות التماسيح كدليل على تقديس التماسيح بالمنطقة، وذلك على غرار ما كان معروف من تقديس للتماسيح في كوم أمبو بصعيد مصر وفي منطقة الفيوم. تهدف الدراسة الحالية إلى الإجابة على عدة أسئلة رئيسية حول هذه الاكتشافات: أين كانت تُربى هذه التماسيح؟ هل تم تربيتها كجزء من عبادة محلية للتماسيح بطريقة منتظمة، أم كان لها غرض آخر؟ هل كانت هذه الموميאות بمثابة قرابين نذرية، أم أن دفنها كان له مغزى مختلف؟ كما يناقش المقال أسباب وجود مثل هذه التماسيح في بيئة جافة نسبيًا، ويستعرض أسباب تحنيطها، والأساليب المتبعة في عملية التحنيط. وأخيرًا، يقارن المقال بين خبئة التماسيح المكتشفة حديثًا في حمرا دوم ومجموعات التماسيح المحنطة المكتشفة في جبانات أخرى في الفيوم وكوم أمبو.

الكلمات المفتاحية: التماسيح؛ سوبك؛ الخبئة؛ قنا؛ الفيوم؛ كوم أمبو.

Introduction :

Hamra Dom is an independent village belonging to the Nag Hammadi district in Qena Governorate. It is historically renowned for the rock-cut tombs of Jabal al-Tarif. Hamra Dom is not known as Qasr we Sayyad ; these are two separate villages also located within the Nag Hammadi district. Historically, Qasr Abu Shadi was known as Qasr al-Qasr we Sayyad before becoming known as Qasr we Sayyad.

Hamra Dom is famous for being an archaeological site containing the tombs of nobles from the Old Kingdom period (such as the tomb of Idu).

Hamra Dom (El-Qasr we Es-Saiyad) is located on the eastern bank of the Nile and was situated in the Seventh Upper Egyptian Nome. A few elite rock-cut tombs have been identified in this cemetery (Baines & Malek, 1980, p. 114). More recently, archaeological excavations in the village of Hamra Dom, at the mountain of El-Tarif, have revealed a remarkable cache of crocodiles. This cache formed part of a large funerary complex comprising more than six chambers. One of these chambers contained dozens of mummified crocodiles, along with associated tools and other mortuary remains.

The discovery provides clear evidence for the veneration of crocodiles at this site and indicates the presence of ritual practices connected to the god Sobek (Shamrouk, 2017). It is particularly striking that this cache was found in an area far removed from any immediate water source, raising important questions about the presence of crocodile mummies in such an arid environment.

Although (Richards, 1997, p. 165) and earlier studies most notably S  ve-S  derbergh's seminal work (S  ve-S  derbergh, 1995, pp. 485-488) have discussed the elite cemetery of Hamra Dom in detail, none have addressed the crocodile cemetery discovered there. This study therefore seeks to examine this neglected aspect, with the aim of clarifying the role of the crocodile at the site and exploring the nature of the cult of Sobek within this funerary context.

The Nile crocodile :

The Nile crocodile (*Crocodylus niloticus*) is one of the largest freshwater reptiles in the world, capable of reaching lengths of up to five meters (18 feet) and weighing as much as 775 kilograms (Snyder, 2011). In antiquity, crocodiles inhabited the entire course of the Nile, and their streamlined bodies long served as an iconic symbol of ancient Egypt (Alderton, 1998, p. 50). (Fig.1)

The Crocodile Cache of Hamra Dom in Qena, Egypt



(Fig: 1) - Nile Crocodile

https://en.wikipedia.org/wiki/Nile_crocodile

Pooley has argued that the Nile crocodile should be divided into two distinct species: one inhabiting the lagoons and wetlands of forested West and Central Africa, identified as *Crocodylus suchus*, and the other occupying the plains and savannas of eastern Africa, known as *Crocodylus niloticus*. The former types (*C. suchus*) are considered to have been smaller and less aggressive, and therefore less likely to attack humans. Both species are believed to have inhabited the Nile River in early historical periods. It has been suggested that ancient Egyptian priests deliberately selected the smaller and more docile species (*C. suchus*) for use in religious ceremonies and temple contexts (Pooley, 2016, p.396).

Breeding the Crocodile :

Nile crocodiles begin to breed when they are around 2.5m in length - this may take 7 years to achieve. Mating occurs in the dry season, when the rainy season begins, the female digs out a nest in a bank near the water. She lays up to 80 white hard-shelled eggs, covers them well with sand and guards them for about 3 months. When the young are ready to hatch, they begin to call with squeaky 'chirps' and their mother digs them

out of the nest. As the miniature crocodiles (about 30cm long) hatch, the female gently picks up a few at a time in her jaws and carries them to a safe nursery area in the water. She will guard them from predators for several more weeks until they go off on their own. At first, the young feed on insects and then, as they grow (about 25cm a year), progress to crabs, birds and fish before tackling the adult diet.

The Nile crocodile was closely associated with water, and its breeding habits were often linked to lakes and riverine environments. Molcho has linked the breeding of crocodiles to Lake Fayum, identifying it as a particularly significant center for crocodile rearing during the Greco-Roman period (Molcho, 2014, pp. 183-184). Anderson likewise notes that the Nile crocodile depends largely on fish as its primary food source (Anderson, 1898, pp.17-18).

If this model is applied to the case of Hamra Dom, it may be suggested that the nearby region of Qina—particularly its riverine or floodplain zones—provided a suitable environment for the breeding and sustenance of crocodiles in ancient Egypt. The practice of feeding crocodiles is currently carried out in more than one place outside of Egypt (Hlaing, M, 2019, 26-34).

Early dynastic Crocodile's burials:

Evidence indicates that crocodile burials in Egypt date back to the pre-dynastic and Early Dynastic periods. Numerous crocodile burials have been identified in Egypt from as early as the Predynastic period. At the cemetery of Hierakonpolis (HK29A), skeletal remains of a crocodile were discovered within a burial context (Linseele, 2009, p. 118). It has been suggested that such burials may have served an apotropaic function, aimed at neutralizing the forces of chaos and evil symbolized by the crocodile during this period (Linseele, 2009, p. 133).

Further evidence comes from excavations conducted by Friedman and her team at the Hierakonpolis cemetery, where a crocodile burial (Tomb 65) -or more precisely, a crocodile-shaped pit- was uncovered just beyond the edge of the cemetery. Although the skeletal remains had been significantly disturbed, the tomb has been dated to the Early Dynastic period,

The Crocodile Cache of Hamra Dom in Qena, Egypt

or possibly slightly later. The crocodile's body appears to have been originally oriented outward, facing the wadi, which suggests a symbolic role as a guardian figure positioned to protect the cemetery (Friedman, 2013, p. 4). (Fig. 2-3).



(Fig: 2) -Crocodile Tomb at HK cemetery
Friedman, R., 2013, p.16.



(Fig: 3) - Reconstructed of crocodile bones – HK cemetery
Friedman, R., 2013, p.16.

Mummification of crocodiles :

The ancient Egyptians not only mummified humans, but also a wide variety of animals. Animal mummies are generally classified into four main categories: pet mummies, food mummies, sacred animals, and votive mummies (Cornelius, 2012, p. 129). According to Douglas (2002–2003), animals were mummified for three principal reasons. Some were beloved pets, preserved by their owners in the hope of reuniting with them in the afterlife. Others were prepared as food offerings and placed in tombs to sustain the deceased in the next world. However, most animal mummies were produced for religious purposes independent of human burial.

The identification of votive animal mummies has been debated by some scholars, who argue that such animals should instead be understood as manifestations or embodiments of deities, subsequently interred in sacred cemeteries (Ikram, 2010, p. 3).

Scientific analyses have further enhanced our understanding of animal mummification practices. A research team from the University of Manchester conducted CT scans on a few mummified animals, including three crocodiles, and demonstrated that the techniques employed in their embalming closely paralleled those used in human mummification in ancient Egypt (Atherton-Woolham, 2014, pp. 10–11).

The analysis of animal mummy bundles in ancient Egypt has led some researchers to suggest that, in certain cases, the process may be described as a form of “humane” mummification (Atherton-Woolham, 2014, pp. 9–17). Ikram provides a detailed account of mummification techniques, noting that methods varied considerably, with some of the most elaborate procedures reserved for larger animals. In certain instances, the internal organs were dissolved through the introduction of cedar oil into the body cavity, after which the opening was sealed. The body was then desiccated in natron for at least forty days. Once dried, pressure was applied to expel the liquefied internal contents, and the remains were subsequently wrapped in the customary manner (Ikram, 2012, p.3).

Large numbers of votive animal mummies were produced in Egypt during the Late Pharaonic, Ptolemaic, and Roman periods. Although millions remain in situ, many have been removed and are now housed in museum collections worldwide (Brettell, 2017, p. 68).

However, the crocodile cache discovered at Hamra Dom appears to differ significantly from these well-documented examples. It does not seem to date to the Late Pharaonic, Ptolemaic, or Roman periods. This raises an important question : was the cult of Sobek and the practice of crocodile mummification already established during the earlier period to which this cemetery belongs—possibly as early as the Old Kingdom ? Clarifying the chronology of the site is therefore

The Crocodile Cache of Hamra Dom in Qena, Egypt

essential for understanding the development of crocodile cult practices in this region.

The Cult of the Crocodile :

Sobek, the crocodile god, was venerated from at least the Old Kingdom onward. Although his name simply means "crocodile," he was regarded as a powerful deity endowed with multiple significant associations within ancient Egyptian religion (Wilkinson, 2003, p. 218).

As a crocodile deity, Sobek embodied many of the physical qualities and behaviors of the living reptile, being described, for example, as "sharp of teeth" (Spencer, 2016, p. 4). He was both feared for his voracious and potentially dangerous nature and venerated for his associations with fertility and the annual Nile inundation, upon which Egyptian agriculture depended.

Sobek is typically depicted as a human figure with a crocodile head. His principal cult centers were in the Fayum and at Kom Ombo. According to Bierbrier, Sobek gained prominence during the late Middle Kingdom and the early Second Intermediate Period, when he was frequently syncretized with the sun god Ra in the form of Sobek-Re (Bierbrier, 2008, pp. 221-222).

Spencer further emphasizes that Sobek was worshipped in a variety of forms throughout Egypt. The ancient Egyptians both feared and revered the Nile crocodile, recognizing it as a powerful, unpredictable, and potentially man-eating predator inhabiting the riverbanks and marshlands. This dual perception is clearly reflected in the complex religious role of Sobek within ancient Egyptian belief systems (Spencer, 2016, p.4).

The ancient Egyptians believed that the Nile itself was connected to Sobek, with some traditions suggesting that the river originated from his sweat. In one myth, Sobek was said to have laid his eggs on the riverbank, thereby initiating the process of creation. Such narratives underscore his association with fertility, regeneration, and cosmic renewal, and help to explain his connection to the rebirth of the deceased in the afterlife. In this context, Sobek also came to symbolize fertility, rebirth, and the strength of the pharaoh (Aziz, 2017, p. 53).

More broadly, the crocodile was regarded as a powerful symbol of fertility and strength. The ancient Egyptians appear

to have conceived of the crocodile as a form of river deity, a belief that reflects the intimate relationship between the animal and the life-giving waters of the Nile (Spencer, 2016, p. 4).

Ikram has explored the relationship between the crocodile and the sun in ancient Egyptian thought, emphasizing the symbolic significance derived from the animal's natural behavior. She notes that crocodiles typically spend the night in the water and emerge at sunrise to bask on riverbanks with their mouths open, before submerging again at nightfall. This daily pattern contributed to their association with the sun god in ancient Egyptian belief (Ikram, 2010, p. 87).

In addition, aspects of the crocodile's physical appearance reinforced its solar symbolism. As Ikram observe, the armored upper skin of the crocodile—composed of scutes or osteoderms—retains heat and resembles radiating sunbursts around a central ridge (Ikram, CASAE 41, 2010, p.87). The spiked form of the tail may evoke solar rays, while the animal's yellow eyes, which shine in the darkness, can be likened to small suns at night. Furthermore, when basking, the reflection of sunlight on the crocodile's scales often produces a shimmering, golden effect, further strengthening its association with solar imagery (Ikram, CASAE 41, 2010, p.87).

Crocodile Cult Centers in Ancient Egypt

The worship of Sobek is likely among the earliest religious traditions in ancient Egypt. His first known depiction appears on a sealing dating to the reign of Narmer, widely regarded as the founder of the First Dynasty. This sealing portrays crocodiles facing a uniquely structured shrine, a motif that later became associated with the city of Shedet (modern Fayum) (Ragheb, M., 2026).

Following the Old Kingdom, Sobek rose to prominence as a local deity in Theban region. By the later Middle Kingdom, Sobek was venerated under the epithet "Sobek of Shedet-Re-Horus, the powerful god," reflecting his integration with solar and royal theology. His worship expanded widely, reaching over fifty towns throughout Egypt. Notably, several rulers of the Thirteenth Dynasty of Egypt incorporated his name into their

The Crocodile Cache of Hamra Dom in Qena, Egypt

own, as exemplified by the frequent royal name Sobekhotep (Zecchi, M., 2010, 55-57).

However, during the Second Intermediate Period of Egypt, Sobek's prominence declined. Although his cult persisted in various localities, he ceased to function as a major state deity. His association with kingship was later revived in the New Kingdom of Egypt, when temples dedicated to him and Horus were constructed within the same precinct at Kom Ombo. Additionally, Amenhotep III actively supported Sobek's cult at Gebel el-Silsila and other locations such as Armant, where a center for breeding sacred crocodiles was established (Ragheb, M., 2026). (Fig.4)



(fig :4) - God Sobek from the temple of Kom Ombo

<https://arce.org/resource/rise-sobek-middle-kingdom/>

Among the most important statues expressing the sanctity of the crocodile was that statue, the statue of Sobek, discovered in the mortuary temple of Amenemhat III—which was attached to his pyramid at Hawara—provides clear evidence of the king's

devotion to the crocodile god. The statue is currently housed in the Ashmolean Museum (Zecchi, M., 2010, 55-57). (fig :5)



(fig :5) - Statue of Sobek - Amenemhat III's mortuary temple-
Ashmolean Museum 1912.605
(Zecchi, M., 2010, fig.6)

From the late period (c. 400–250 BCE) this statue (fig :6) which depicts Sobek with the falcon head of Re-Harakhti, reflecting the syncretism between the two deities in the composite form of Sobek-Re. The statue is currently preserved in the Walters Art Museum.



(fig :6) - Sobek with the falcon head of Re-Harakhti
<https://art.thewalters.org/object/22.347/>

The Crocodile Cache of Hamra Dom in Qena, Egypt

So, Crocodile worship was particularly prominent in several regions of Egypt, notably in the Fayum and at Kom Ombo in Upper Egypt. In both locations, the crocodile was revered as a symbol of fertility and strength. The Fayum, a fertile depression south of Memphis, contained a large lake during the Pharaonic period and became a major center for Sobek worship (Cornelius, 2012, p. 129). The region was especially developed during Dynasty 12, with several rulers interred either at Hawara within the Fayum or nearby at Lahun. In this area, the principal deity was the crocodile god Sobek, whose cult played a central role in the religious and social life of the region (Bierbrier, 2012, p. 129).

Hamra Dom Cemetery :

The transition from centralized power to regional autonomy is often regarded as a hallmark of civilization, and the late Old Kingdom in Egypt is commonly described as a period of feebleness, marked by the gradual breakdown of the central government based in Memphis and a corresponding rise in the authority of local officials. One manifestation of this shift is the construction of large rock-cut tombs near regional centers, reflecting the fact that provincial elites no longer felt compelled to be buried in the Memphite necropolis alongside the funerary complexes of their kings. Numerous provincial cemeteries for late Old Kingdom officials exist throughout Middle and Upper Egypt, including sites at Denderah, Sheikh Said, Deir El-Gebrawi, Deshasheh, and Meir. The cemetery at Hamra Dom (El-Qasr we Es-Saiyad) in Qena continues to yield surprising discoveries to this day (Weins, 1996).

The modern name Qena derives from the ancient Egyptian term *Incubated*, referring to the “pleat of the Nile” at this location, where the river appears to be embraced by the land, symbolically “Qena embracing the Nile” (Nour El-Din, 2004, p. 295). Rock-cut tombs at Gebel El-Tarif, near the modern villages of El-Qasr and Es-Saiyad, as well as at Hamra Dom northeast on the right bank of the Nile in the Seventh Upper Egyptian Nome, date to the end of the Old Kingdom. Historical sources indicate that such tombs were carved into the mountainside during the era of ancient state, particularly under

the reign of King Pepi II of the Sixth Dynasty (Williams, 1998, p. 302). The newly discovered crocodile cache on Mount Tariff lies approximately one kilometer from this cemetery, a site traditionally associated with the Old Kingdom and the Sixth Dynasty (Richards, 1997, p. 165).

The Cache of crocodiles at Hamra Dom :

It is generally understood that crocodiles were raised in lakes located near their burial sites. This raises the question : where was the lake associated with the crocodiles found at El-Tariff Mountain ? Today, no such lake exists, prompting inquiries about the original habitat of these animals. Ibrahim, a geography professor, explained that the discovery of a crocodile cache at El-Tariff necessarily implies the historical presence of a suitable aquatic environment. He noted that the crocodile god Sobek was closely associated with wetlands and identified two well-known crocodile cemeteries in watery regions: Fayum, associated with Lake Qaroun, and Kom Ombo, linked to the Kom Ombo basin. Ibrahim suggested that the crocodiles at El-Tariff likely lived in an ancient water environment that may have been connected to the Nile and altered by geographical changes over the past four thousand years. Alternatively, the crocodiles could have inhabited the course of the Nile itself before the construction of the Aswan High Dam, after which crocodiles were confined to Lake Nasser (El Wakil, 2017).

Mohamed Hamed, director of the Supreme Council of Antiquities in Qena, similarly proposed that the area may have contained an ancient lake during the Pharaonic period, which would explain the presence of crocodiles as symbols of the god Sobek (El Wakil, 2017). The finding of crocodile fossils at Mount El-Tariff is consistent with the region's significant geographical changes over time. Ayman Hindi, director of the Qena area, noted that the region comprised the Seventh Upper Egyptian Nome, known as the Nome of Bat, and was the center of local cemeteries. These included rock-cut tombs along Mount El-Tariff, many inscribed and dated to the reign of Pepi II and slightly later.

The details of the crocodile cache's discovery remain partially mysterious. The initial excavation involved the

The Crocodile Cache of Hamra Dom in Qena, Egypt

removal of crocodiles, likely disturbed by antiquities looters, who reportedly took portable artifacts but left the crocodile mummies. The mummies were of various sizes, with most being small; in some cases, a large crocodile mummy contained several smaller ones inside. When first discovered, strange objects wrapped in ancient linen were reported in a deep pit on the mountain overlooking Hamra Dom, near an area known as Ezbet al-Boussa, a site frequented by looters. Among these objects were Nile crocodiles, which the ancient Egyptians had sanctified as embodiments of Sobek. This discovery represents the first recorded evidence of such a cache in this region (Abd El-Hamid, 2017).

The crocodile mummies from Hamra Dom were eventually transported to the Crocodile Museum on Kom Ombo Island, which is dedicated to the cult of Sobek (Fig. 7).



(Fig: 7) - Crocodile's mummies from Kom Ombo Crocodile Museum

https://commons.wikimedia.org/wiki/File:Kom_Ombo

Distrollc described the Crocodile Museum at Kom Ombo, noting that it displays twenty-two mummified crocodiles of various sizes, selected from approximately forty unearthed in the Aswan region. The crocodiles are arranged on a sand-covered platform within a large glass case, providing visitors

with a visual representation of how these animals were perceived and revered in ancient Egypt. The museum also houses a collection of crocodile coffins and wooden sarcophagi, as well as crocodile fetuses and eggs. In addition, stelae and statues depicting the crocodile god Sobek—often represented with a human body and a crocodile head—are exhibited. Replicas of Sobek's original tombs and niches further illustrate the religious and ritual context of crocodile worship in ancient Egypt (Distrollc, 2016).

Conclusion :

It is possible to establish a connection between the location of the crocodile cache within the cemetery and the religious role of the god Sobek. Sobek was believed to assist the sun in its journey through the Lower World and to aid the deceased in the process of rebirth. This association can be linked to the depictions of crocodile-shaped boats in ancient Egyptian art, which symbolically carried the deceased through the other world. The discovery of crocodile caches in multiple cemeteries reinforces Sobek's role as master of the waters and protector, guiding the dead on their journey in the afterlife.

The presence of the crocodile cache at Hamra Dom may also indicate the existence of a temple dedicated to Sobek in the area. The region of Qena, with its fertile and riverine environment, may have been particularly suitable for breeding crocodiles in ancient Egypt. The crocodile cemetery at Hamra Dom provides some of the most significant evidence for the worship and mummification of crocodiles at the end of the Old Kingdom. The techniques used in crocodile mummification appear to have followed, at least in part, the same traditions as human mummification. Since predynastic times, crocodiles have been closely associated with the afterlife, as evidenced by their symbolic representation alongside boats in early Egyptian art, underscoring their enduring connection to the world beyond.

The Crocodile Cache of Hamra Dom in Qena, Egypt

References :

- Abd El-Hamid, H.M., Mount Altarf" monuments from thousands of years old abandoned by officials and terror dwell in it, Saturday, December 09, 2017 - 8 :58, <http://www.vetogate.com/2981761>
- Albert, M. R., the Alligator and its Allies, Landisville, 2000.
- Aldred, D., Crocodiles and Alligators of the World, London, 1998.
- Atherton-Woolham, S.D., & McKnight, L.M., post-mortem restorations in ancient Egyptian animal mummies using, KNH Centre for Biomedical Egyptology, Faculty of Life Sciences, The University of Manchester, Manchester, UK, Papers on Anthropology XXIII/1, 2014.
- Aziz, S., Crocodile, God of the Nile, the veneration, mummification and use of the crocodile in ancient Egyptian and magic, **Nile**, April 2017.
- Baines, J., & Malek, J., cultural atlas of ancient Egypt, Oxford, 1980.
- Bierbrier, M.L., Historical Dictionary of Ancient Egypt, 2nd edition, Toronto, 2008.
- Brettell, R., Martin, W., Atherton-Woolham, S., Stern, B., & McKnight, L., Organic residue analysis of Egyptian votive mummies and their research potential, **Studies in Conservation**, VOL. 62 NO. 2, 2017.
- Cornelius, I., Swanepoel, L.C., & other, looking inside votive creatures: computed tomography (ct) scanning of ancient Egyptian mummified animals in Iziko museums of South Africa : a preliminary report, in : **Akroterion** 57 (2012).
- Distroll, M., Crocodile Museum at Kom Ombo Egypt, August 20, 2016, <https://traveltoeat.com/crocodile-museum-at-kom-ombo-egypt/>
- Douglas, O., Discover animals and beliefs, DCF Court Project, 2002-03
- El Wakil, A., Professor geographically: the crocodiles discovered in Bnja Hammadi lived in a lake close to Mount Tariff, February 11, 2017, <http://nagaawya.weladelbalad.com>
- Friedman, R., In a Corner at HK6 — At Last, in : **Nekhen News**, vol.25, 2013.
- Hlaing, M.M., Crocodile Conservation and Breeding Management Issues and Constraints: Experience of Myanmar, Fish for the people, vol.17, no.2, 2019, pp.26-34.
- Ikram, S., creatures of the gods: animal mummies, in : **Anthro Notes**, Volume 33 No. 1 Spring 2012.
- Ikram, S., Crocodiles : Guardians of the Gateways, in Thebes and Beyond, **CASAE** 41, 2010.
- Ikram, S., Title Mummification, in : **UCLA Encyclopedia of Egyptology**, 1024 Version 1, September 2010.

Zainab Abd Eltwab Riyad Khamis

- Linseele, V., & Wim Van Neer, W., & Friedman, R., *Special Animals from a Special Place ? The Fauna from HK29A at Predynastic Hierakonpolis*, **JARCE**, Vol. 45 (2009).
- Molcho, M., *Crocodile breeding in the crocodile cults of the Greco-roman Fayum*, in : **JEA**, Vol. 100 (2014).
- Nour El-din, M.A., *ancient Egyptian language*, Cairo, 2004, p.295.
- Pooley, S., *the entangled relations of humans and Nile crocodiles in Africa*, C. 1984-1992, London, 2016, s.pooley@bbk.ac.uk
- Richards, J.E., *From Farmers to Pharaohs: Mortuary Evidence for the Rise of Complex Society ; The Old Kingdom Cemetery at Hamra Dom (el-Qasr wa es-Saiyad) by Säve-Söderbergh, T.*, in: **AJA**, Vol. 101, No. 1 (Jan. 1997).
- Robinson, A.E., *the Cult of the Crocodile*, in : *Source : American Anthropologist*, **New Series**, Vol. 34, No. 3 (Jul. - Sep. 1932).
- Säve-Söderbergh, T., *The Old Kingdom cemetery at Hamra Dom (El-Qasr wa es-Saiyad)*, In: *Orientalistische Literaturzeitung*, 90 (1995), pp. 485-488
- Shamrouk, M., *El- Ahram opens the file of Hamra dom antidiuties. Tomb of crocodiles. Un complete discovery*, 14 June, 2017, <http://www.ahram.org.eg/NewsQ/599082.aspx>
- SHEMU, *The Egyptian society of South Africa ; Hawara's crocodile mummies*, **SHEMU**, Volume 19, Number 4, [Owww.egyptiansociety.co.za](http://www.egyptiansociety.co.za). October 2015.
- Snyder, K., *Mummy DNA helps researchers solve the riddle of the Nile crocodile*, *American Museum of natural history*, No.98, September 2011, www.amnh.org
- Spencer, N., *Egypt and Sudan, Newsletter, the British museum*, Issue 3, 2016.
- Weins, J.M., *The Old Kingdom Cemetery at Hamra Dom*, *American Oriintal Society*, 1996, <https://www.thefreelibrary.com/The+Old+Kingdom+Cemetery+at+Hamra+Don.-a019254851>
- Wikinson, H., *the complete gods and goddesses of ancient Egypt*, London, 2003.
- Williams, B., *the Old Kingdom Cemetery at Hamra Dom (El-Qasr wa es-Saiyad) by Torgny Säve-Söderbergh*, in : **JNES**, Vol. 57, No. 4 (Oct. 1998).
- Zecchi, M., *SOBEK OF SHEDET The Crocodile God in the Fayyum in the Dynastic Period*, Tau Editrice, 2010.