



Trabajos de Egiptología

The Fate of Expatraite Temples: Ellesiya, Taffa, Dendur and Debod
Alfonso MARTÍN FLORES

**Napatan Tomb Decorations. Loans from Private Theban Burials
in the Royal Kushite Necropolises**
Simone PETACCHI



 **Centros de Estudios Africanos**
Universidad de La Laguna



132022

Trabajos de Egiptología

Trabajos de Egiptología

Papers on Ancient Egypt

**Preliminary Report on the Third and Fourth Seasons
of the New Kingdom Scribes Project (2021–2022)**

Lucía DÍAZ-IGLESIAS LLANOS, Ángeles JIMÉNEZ-HIGUERAS,
Daniel Miguel MÉNDEZ-RODRÍGUEZ, Ignacio BERMEJA GIGORRO,
Sagrario MARTÍNEZ RAMÍREZ, Santiago SÁNCHEZ-CORTÉS, Antonio GÓMEZ LAGUNA

**Songs and Hymns for Hathor as Gold from the Old Kingdom
to the Late Period. Part I. Corpora of Texts and Complementary Documents**
Francisco L. BORREGO GALLARDO

The God Shed at Amarna
Graciela Noemí GESTOSO SINGER

Cultural Similarities between Ancient Egypt and Byzantium
Lloyd D. GRAHAM

A Female Egyptian Statuette in the Museo Arqueológico Nacional, Madrid
Miguel JARAMAGO



número 13
2022

Trabajos de Egiptología
Papers on Ancient Egypt

Trabajos de Egiptología

Papers on Ancient Egypt

Consejo editorial

Director

Miguel Ángel Molinero Polo
Universidad de La Laguna, Tenerife, Islas Canarias

Secretaría de edición

Lucía Díaz-Iglesias Llanos
Consejo Superior de Investigaciones Científicas, Madrid

Alba María Villar Gómez
Subdirección General de los Archivos Estatales
(Ministerio de Cultura y Deporte)

Colaborador de edición | English editorial assistant

Claire Gilmour
University of Glasgow / University of Bristol, Reino Unido

Consejo de redacción

Antonio Pérez Largacha
Universidad Internacional de la Rioja (UNIR)

José Ramón Pérez-Accino
Universidad Complutense de Madrid

Comité científico

Marcelo Campagno
CONICET | Universidad de Buenos Aires

Josep Cervelló i Autori
Universitat Autònoma de Barcelona

Andrés Diego Espinel
Consejo Superior de Investigaciones Científicas, Madrid

María José López-Grande
Universidad Autónoma de Madrid

Josep Padró i Parcerisa
Universitat de Barcelona

M.^a Carmen Pérez Die
Museo Arqueológico Nacional, Madrid

Esther Pons Mellado
Museo Arqueológico Nacional, Madrid

José Miguel Serrano Delgado
Universidad de Sevilla

Fundadores de la revista

Miguel Ángel Molinero Polo
Antonio Pérez Largacha

José Ramón Pérez-Accino
Covadonga Sevilla Cueva

Número 13
2022

Índice | Contents

Trabajo de campo | Fieldwork

Preliminary Report on the Third and Fourth Seasons of the New Kingdom Scribes Project (2021–2022)	9-51
Lucía DÍAZ-IGLESIAS LLANOS, Ángeles JIMÉNEZ-HIGUERAS, Daniel Miguel MÉNDEZ-RODRÍGUEZ, Ignacio BERMEJA GIGORRO, Sagrario MARTÍNEZ RAMÍREZ, Santiago SÁNCHEZ-CORTÉS, Antonio GÓMEZ LAGUNA	

Artículos | Articles

Songs and Hymns for Hathor as Gold from the Old Kingdom to the Late Period. Part I. Corpora of Texts and Complementary Documents	55-129
Francisco L. BORREGO GALLARDO	
The God Shed at Amarna	131-147
Graciela Noemí GESTOSO SINGER	
Cultural Similarities between Ancient Egypt and Byzantium	149-179
Lloyd D. GRAHAM	
A Female Egyptian Statuette in the Museo Arqueológico Nacional, Madrid	181-198
Miguel JARAMAGO	
The Fate of Expatraite Temples: Ellesiya, Taffa, Dendur and Debod	199-237
Alfonso MARTÍN FLORES	
Napatan Tomb Decorations. Loans from Private Theban Burials in the Royal Kushite Necropolises	239-254
Simone PETACCHI	
Submission Guidelines	255-258

Trabajos de Egiptología está producida por Isfet. Egiptología e Historia con la colaboración del Centro de Estudios Africanos de la Universidad de La Laguna

C/ Felipe Castillo González 28
Tejina
38260 San Cristóbal de La Laguna
Santa Cruz de Tenerife - Islas Canarias
España

© De los textos: sus autores y Trabajos de Egiptología

Diseño de arte y maquetación
Amparo Errandonea
aeamparo@gmail.com

Imprime: Gráfica Los Majuelos

Depósito Legal: TF 935-2015
ISSN: 1695-4750

Artículos | Articles

The God Shed at Amarna

Graciela GESTOSO SINGER

During the Amarna Period (fourteenth century BCE), Akkadian and Hittite texts attest a lethal epidemic that spread from Egypt to Syria and the land of Hatti. DNA studies conducted on the mummies of Tutankhamun and two other members of the royal family (Thuya and Yuya) confirmed that they had been infected with malaria. Excavations at the Southern and Northern Tombs reveal evidence of traces of dietary deficiency, diseases, and heavy workloads. The discovery of stelae and chapels in the workmen's village that were dedicated to the worship of ancestors and of the gods Amun, Aten, Shed, and Isis permit an analysis of the different forms of materialization of the ancestral memory of a population during hard times. The last days of Amarna witnessed the cult of the god Shed, the "Savior," who sought to save the Egyptians from disease and misfortune. The presence of several diseases that were easily spread in the poor living conditions of the tomb workers could explain the short period of activity of the new capital (ca. 1350–1330 BCE). New archaeological evidence allows us to interpret the practices of private worship of ancestors and gods as evidence of a complex economic-social and political phenomenon that arose during a time of changes and marked a transition towards the restoration of traditional cults.

El dios Shed en Amarna

Durante el período de Amarna (siglo XIV a.C.), los textos acadios e hititas atestiguan una epidemia letal que se extendió desde Egipto a Siria y a la tierra de Hatti. Los estudios de ADN realizados en las momias de Tutankamón y otros dos miembros de la familia real (Tuya y Yuya) confirmaron que habían sido infectados con malaria. Las excavaciones en las tumbas del sur y del norte revelan evidencia de rastros de deficiencia dietética, enfermedades y cargas de trabajo pesadas. El descubrimiento de estelas y capillas en la aldea de los trabajadores dedicadas al culto de los antepasados y de los dioses Amón, Atón, Shed e Isis permiten analizar las diferentes formas de materialización de la memoria ancestral de una población en tiempos difíciles. Los últimos días de Amarna fueron testigos del culto del dios Shed, el "Salvador", que buscaba salvar a los egipcios de la enfermedad y la desgracia. La presencia de varias enfermedades que se propagaron fácilmente en las malas condiciones de vida en la aldea de los trabajadores de las tumbas podría explicar el corto período de actividad de la nueva capital (ca. 1350-1330 a.C.). La nueva evidencia arqueológica nos permite interpretar las prácticas de culto privado a los antepasados y dioses como evidencia de un complejo fenómeno económico-social y político que surgió durante una época de cambios y marcó una transición hacia la restauración de los cultos tradicionales.

Keywords: ancestors, diseases, plague, rituals.

Palabras clave: ancestros, enfermedades, plaga, rituales.

1 | Epidemics in the Amarna Period

Textual evidence confirms the outbreak of a fatal epidemic in several regions in the Levant during the Amarna Period (fourteenth century BCE). The pestilence, a fatal epidemic, or the metaphorical

expression the "hand of Nergal" are mentioned in –among other sources– the Amarna Letters and the Hittite Prayers.¹

According to the Amarna Letters (EA),² the plague affected Egypt, Megiddo, Sumur, Byblos, and *Alashiya* (Cyprus). For example, EA 11, 5–15,

1 For a detailed study of all the above-mentioned texts, see Gestoso Singer 2017: 223–272.

2 For an analysis of EA 11; EA 35; EA 96; EA 244, and EA 362, see Gestoso Singer 2019: 171–179.

sent by Burnaburiash of Babylon to Akhenaten, mentions that a woman who was either betrothed or sent to Pharaoh died, probably due to the plague. According to EA 35, 10–15, the ruler of *Alashiya* sent to Pharaoh a very small amount of copper because the epidemic that was sweeping his country had decimated his miners:

Now, I have sent to you five hundred (talents, shekels, or ingots) of copper. As my brother's greeting-gift, I have sent it to you. My brother, that the amount of copper is small, may it not be taken to your heart, because the hand of Nergal, my lord, is in my land. He has slain all the men of my land, and there is not a (single) copper-worker.³

In EA 96, 2–28, a letter sent to Rib-Hadda from Byblos, the ruler of this city expresses concern about the spread of a disease that is affecting the population and/or pack animals (asses) in the city of Sumur. From EA 244, 8–43, we know that Biridiya, the ruler of Megiddo, informed the Pharaoh that his city was besieged by Labaya, the ruler of Shechem, and that it was being consumed by the plague. Finally, in EA 362, Rib-Hadda of Byblos informs the Pharaoh that “there is no pestilence (*mu-ta-na*) in the lands (...). This (epidemic) has been over for a long time.”⁴

Hittite texts provide information about the spread of the plague from Egypt to Syria (and then Hatti) during the war in Amqa. In the Second Plague Prayer of the Hittite king Mursili II

(ca. 1321–1285 BCE),⁵ the attack on Amqa and the cause of the epidemic are recorded:

My father sent infantry and chariotry, and they attacked the borderland of Egypt, the land of Amqa (...). My father was appalled and he went to Egyptian territory, attacked the Egyptians, and destroyed the Egyptian infantry and chariotry (...). But when the prisoners of war who had been captured were led back to the land of Hatti, a plague broke out among the prisoners and they began to die. When the prisoners of war were carried off to the land of Hatti, the prisoners of war brought the plague into the Hatti land. From that day on people have been dying in the land of Hatti.⁶

In short, the text proves that the Egyptian soldiers who were captured by Suppiluliuma I on the battlefield at Amqa carried the pestilence towards the Hittite kingdom. We know from the Hittite Prayers that the plague lasted for two decades: “You have allowed a plague into Hatti (...). People have been dying in Hatti for twenty years.”⁷

A recent study by Smith-Guzmán⁸ indicates that although many possible causes have been suggested for this plague, malaria best fits the profile, as it has a long incubation period of about two weeks. Paleo-climatic studies suggest a hot and humid period between ca. 1500 and 1100 BCE, allowing an increase in mosquito population size and geographic range. Currently, the dominant vector of malaria in Anatolia is *Anopheles sacharovi*, a mosquito whose ability to live at high altitudes

3 Moran 1992: 107; Rainey 2015: 341 (for talents); Papadopoulou 2018: 65 (for shekels). Cf. Moran 1992: 105, n. 5 (for talents, or perhaps bars or ingots, in EA 35: 10; EA 36: 6; EA 40: 7, 13).

4 EA 362: 9–13, 46–50.

5 CTH 378.2; KUB 14.8; KUB 14.11 + 650/u; KUB 14.10 + KUB 26.86; Singer 2002: 57–61.

6 KUB14.8, and its duplicates in KUB14.10+KUB26.86 and KUB14.11+650/u; CTH 378.2, §§ 4–5, obv. 20'–30', in Singer 2002: 58.

7 Prayer N° 11, CTH 378.2, §1, in Singer 2002: 57. Cf. Gestoso Singer 2017: 231–233.

8 Smith-Guzmán 2017: 7.

and to overwinter would have allowed the protozoan parasite *Plasmodium falciparum* to take hold in the capital of the Hittite empire. Movement of the population between the capital and the rural outskirts and surrounding villages would have provided the fuel needed to keep the epidemic active for some twenty years, as King Mursili II laments in his Plague Prayers. However, several diseases (such as tuberculosis, smallpox, dysentery, and malaria) have been proven to exist in Amarna at a moment that would have overlapped with the end of Akhenaten's reign.⁹

Recent paleo-entomologist finds in the city of El Amarna demonstrate that conditions in which the bacteria that causes the bubonic plague were possibly present in Egypt, such as humans, rats and fleas living in close conditions with limited hygiene.¹⁰ Panagiotakopulu,¹¹ a paleo-entomologist, investigated the potential diseases that infested the workmen's village in Amarna and discovered remains of fossilized fleas –known carriers of bacteria (*Yersinia pestis*) of the Black Death (bubonic plague). According to Panagiotakopulu,¹² Kemp, the director of the excavations at Amarna, facilitated the work at the site and provided samples for archaeo-entomological research. Panagiotakopulu¹³ combed the site of the workmen's village at Amarna, where the builders of the tombs of Tutankhamun and Akhenaten lived, and found cat fleas

(*Ctenocephalides felis*) and thirty-five human fleas (*Pulex irritans L.*) in and around workers' homes. She also conjectures from a variety of evidence that “the coexistence of the Nile rat, humans and ectoparasites in urban centers in combination with trade with Asia, Africa and the Mediterranean, together with the Nile floods and the introduction of the black rat, circle Egypt as the most probable place of origin of bubonic plague as an epidemic disease.”¹⁴ Fleas, bedbugs, and other insects and parasites proliferated amid the poor living conditions of the tombs' workmen. This, along with other economic and socio-political factors, may explain the short period of activity of the city of Amarna (ca. 1350–1330 BCE) as the capital and cult center of the god Aten. Nevertheless, there is no direct archaeological evidence that the bubonic plague affected the inhabitants of the Workmen's Village.

It is quite possible that the sudden death of several members of the Egyptian royal family could be related to plague (probably bubonic plague)¹⁵ and other diseases (such as malaria and tuberculosis). In Egypt, around Year 12 of his reign, Akhenaten (ca. 1337 BCE)¹⁶ had six daughters and his empire was at its pinnacle, as foreign delegations from all the courts of the Levant were bringing tribute and gifts to Egypt. But suddenly some of Pharaoh's daughters began to die. According to Dodson,¹⁷ it is

9 Shanks *et alii* 2008; Smith 2015: 100–101; Smith-Guzmán *et alii* 2016: 1; Gestoso Singer 2021: 59–60.

10 I am grateful to the editor and the anonymous referees for the references and suggestions.

11 Panagiotakopulu 2004: 269–275.

12 Panagiotakopulu 2001: 499.

13 Panagiotakopulu 2004: 273. Cf. Panagiotakopulu 2001: 500, figs. 1–2.

14 Cf. Robertson 2007: 22, n. 77; Kozloff 2006: 36–46, 2012: 114–115.

15 Dodson 2009: 17, 2012: 2.

16 Kemp *et alii* 2013: 64. Akhenaten ruled for 17 years, ca. 1349–1332 BCE.

17 Dodson 2009: 17, 2012: 2. Cf. Helck 1971: 182–183, 189–190.

possible that the festival of Year 12 of Akhenaten was the occasion for the outbreak of an epidemic in the city: “Soon afterward, a number of deaths occurred within the royal family, including Tiye and up to three of the king’s daughters. It has been suggested that a plague brought into Egypt by the Year 12 (foreign) delegates may have been responsible.” The reliefs of the tomb of Meryra II (Tomb 2) include the latest representations of the complete royal family, where the king is seen receiving tribute from Syria and Nubia in Year 12 of his reign.¹⁸ Queen Mother Tiye was last depicted shortly after Year 12 of Akhenaten, judging by the scenes in Huyu’s tomb (Tomb 1).¹⁹ Approximately in Year 13 or 14, Meketaten, the second daughter of Akhenaten, died, and her death was commemorated by several representations of the royal family mourning at her royal tomb.²⁰ Between Years 12 and 17, Queen Mother Tiye, Akhenaten, Kiya, and the princesses Meketaten, Meritaten, Setepenra, and Neferneferura all died. Recent discoveries in the limestone quarries at Deir Abū Hinnis brought to light a hieratic inscription that mentions that Queen Nefertiti was present at Amarna in Year 16 of Akhenaten’s reign, much later than previously thought.²¹

Tutankhamun’s short life span has sparked serious debate about the cause of his death. Recently, DNA tests performed on the mummy of the Pharaoh indicated that malaria was implicated as one of the factors in his early death.²² The DNA study found positive genetic markers for two different strains of tropical malaria (*Plasmodium falciparum*) in Tutankhamun’s mummified tissue, suggesting that the Pharaoh had a double malaria infection at the time of his death. The mummies of two other members of the royal family (Thuya and Yuya) were also studied, and both tested positive for malaria.²³

The non-elite members of the city were likewise affected by diseases and heavy workloads: the skeletal evidence at Amarna’s South Tombs Cemetery (STC) revealed a high frequency of lesions previously associated with malaria.²⁴ For example, a study conducted by Smith²⁵ has examined the skeletal remains for patterns of malarial prevalence. Skeletal lesions evidenced the recent impact of malarial infection on around half of the population.²⁶ Analysis of demographics, burial patterns, and stature showed a greater mortality risk for women and children, with declining health and abnormal burial patterns (multiple burials) over time, especially for women.²⁷

18 Davies 1905a: pl. 38.

19 In these scenes, Tiye is depicted at a dinner table with Akhenaten, Nefertiti, and other members of the royal family, and being escorted by the Pharaoh to her shrine (lit. “sunshade”) (Davies 1905b: pl. 9). According to Redford (1984: 187), Tiye was last depicted in Year 14 of Akhenaten’s reign.

20 Redford 1984: 186 (for Year 14 of Akhenaten); Tyldesley 2003: 162–163; Seyfried 2012: 190 (for Year 13 or 14).

21 Van der Perre 2014; Stevens 2016: 6.

22 Hawass *et alii* 2010; Kemp and Zink 2012: 22.

23 Smith 2015: 11; Smith-Guzmán 2017: 6.

24 Shanks *et alii* 2008; Smith 2015: 100–101; Smith-Guzmán *et alii* 2016: 1.

25 Smith 2015: 103.

26 Smith-Guzmán 2017: 6.

27 For burial rites, see Kemp *et alii* 2013: 67.

These patterns align with models of unstable endemic malaria, which likely co-infected with other diseases present at Amarna (perhaps tuberculosis, dysentery, bubonic plague, and so on) to increase total mortality.²⁸ Nevertheless, recent studies conducted at Amarna’s cemeteries argue against the existence of an epidemic in the city.²⁹ According to Dabbs, Rose and Zabecki,³⁰ the analyzed skeletal remains (274) from the non-elite South Tomb Cemetery (STC) at Amarna reflect “a life filled with high levels of general, nutritional, and workload stress.”³¹

As for the burial patterns, Kemp³² argues that they were characterized by a general simplicity, consisting in many cases of mere pits dug into the desert sand, containing more than one body; some of these graves were densely occupied. The bodies were almost always wrapped in cloth and placed inside a kind of funeral container made of mats. On occasion, the bodies were placed in wooden coffins,³³ ranging from undecorated boxes to anthropoid-style coffins, that were decorated with scenes of offerings and funerary texts. Grave goods are scarce and consisted of a pottery vessel with food, amulets, mirrors, and cosmetic containers.

Recent discoveries at another non-elite cemetery at Amarna, at the northern end of the city

(NTC), reveal that the dead were buried with almost no grave goods, and only rough matting was used to wrap the bodies. According to Stevens,³⁴ the body of the deceased was first wrapped with a simple mat and then taken to one of the cemeteries and placed in a pit dug in the desert sand. In general, most people were buried without any grave goods, and there were no traces of wooden coffins.³⁵ According to Dabbs, more than ninety percent of the skeletons (from 105 individuals) have an estimated age of between seven and twenty-five years, with the majority of these estimated to be younger than fifteen. Basically, this cemetery was a burial place for teenagers. The majority of the 15–25-year-olds had suffered some kind of traumatic injury, and around ten percent had developed osteoarthritis. Even among those under fifteen, sixteen percent were found to have spinal fractures, along with other abnormalities usually associated with heavy workloads. This population seems to have been a workforce of children and teenagers who were required to perform frequent heavy labor (*corvée*) at the new city. Forty-three percent of the graves contained more than one individual (some held as many as five or six skeletons), which is far higher than the small proportion of

28 Gestoso Singer 2021: 59–60.

29 Cf. Stevens 2020: 150–167 (for the STC); Dabbs *et alii* 2022: 3–5. I am grateful to the editor and the anonymous referees for the references and suggestions.

30 Dabbs *et alii* 2015: 31.

31 For example, nutritional stress is reflected in the skeletal lesions of *cribra orbitalia*, porotic hyperostosis, and scurvy. Workload stress in adults is manifest in the frequency of spinal trauma, and degenerative joint disease (Dabbs *et alii* 2015: 31).

32 Kemp *et alii* 2013: 67–68.

33 “A second, and presumed higher, class of burial treatment is represented by wooden coffins, of which there is a relatively small number (n=20) within the entire cemetery” (Dabbs *et alii* 2015: 33–34. Cf. Kemp *et alii* 2013: 67).

34 Stevens *et alii* 2016: 16–17.

35 “As in 2015, very few artefacts were encountered during the excavations (in 2017);” for example, a necklace (obj. 41418) of glass and faience beads, and one with gold-leaf finish, and a steatite scarab with the name of Amenhotep II (obj. 41419) were found in one burial (Ind. 1160) at the North bank (Stevens and Dabbs 2017: 144–145).

multiple graves at the other Amarna cemeteries.³⁶ According to Stevens and Dabbs,³⁷

it is clear that the North Tombs Cemetery is a highly unusual burial ground. It is tempting to see those interred here as the victims of an epidemic, but this is not a very satisfactory explanation, at least not on its own: if this were the case, we would expect to see a broader distribution of individuals across the age spectrum (...). Many of the multiple burials might be understood as those of individuals who died at roughly the same time and were buried expediently in the same grave.

Also, Stevens and Dabbs³⁸ affirm that “a high percentage of the sample (85.7%) exhibits a combination of lesions (*cribra orbitalia* or humeral *cribra* or femoral *cribra* together with spinal porosity or periostitis of the lower limbs) that have been previously identified as indicators of malarial infection.”³⁹ Recent studies from the bioarchaeological team at Amarna argue against the presence of epidemic diseases at Amarna.⁴⁰

In sum, in both the southern and northern cemeteries, the evidence includes traces of dietary

deficiency (in vitamins B12, D and C and in iron), disease, and heavy workloads.⁴¹ The skeletons of people of all ages over the age of seven (the approximate end of non-working childhood) exhibit injuries related to degenerative joint diseases (such as arthritis), spinal trauma, and fractures typical of workplace accidents.⁴² Finally, it should be noted that in the southern cemetery, the one most extensively excavated so far, the average age of death among those who survived to adulthood was about thirty years, while the preliminary excavations carried out in the northern cemetery reveal an even younger population: adolescents and young adults (under twenty-five years old).⁴³

2 | The God Shed at El Amarna

In Egypt, Shed was revered as a savior in the face of disease, danger, and catastrophe. The god Shed first appeared –according to Loukianoff and Romano⁴⁴ in the Egyptian pantheon during the Eighteenth Dynasty, although there are

relatively few representations of the god known from this period. According to van Dijk,⁴⁵ this god was first documented in the city of Amarna. However, other researchers⁴⁶ believe that Shed was worshipped only after the Amarna Period. Redford⁴⁷ considers that the name of the god derives from the Egyptian verb *šdj* “to save; rescue,” and from the word *šd*, “wise.”⁴⁸ Consequently, he was considered a “savior” god, known as “The One Who Rescues”, “The Enchanter”, “The Reciter”, and the “Lord of the Deserts.”⁴⁹ He was associated with the Syrian-Canaanite god Resheph, a protector against plagues, pestilence, and war,⁵⁰ and with Horus the Child (or Harpocrates), because he protected against dangerous animals.⁵¹ Shed was worshipped by the population in daily and private worship, and not at the official or state level. The Egyptians resorted to him for relief from diseases, plagues, catastrophes, snakebites, and scorpion stings.⁵²

Shed’s name is mentioned on several stelae, amulets, pendants, scarabs, and protective plaques, including prayers and requests for help from this god.⁵³ In the private chapels excavated at Deir el-Medina, stelae depicting Shed and Isis as “enchanters” have been found.⁵⁴ On one of these stelae it is recorded: “Shed comes from the desert with the eye of Horus (*Udjat/Wedjat*; Eg. *wḏjt*) to protect this house.”⁵⁵ In hymns and prayers of the New Kingdom, Shed is invoked as the god who is able to rescue men from the Underworld and as the savior against disease and in times of crisis.⁵⁶ In general, Shed was depicted as a boy or young man, confronting snakes, scorpions, and lions, and sometimes standing on one or two crocodiles.⁵⁷ On some occasions, he was depicted on a chariot pulled by horses or griffins.⁵⁸ According to Pinch,⁵⁹ Shed “is often no more than a specialized form of Horus. His function was to protect and heal by means of

36 Shepperson 2017.

37 Stevens and Dabbs 2017: 148. Cf. Stevens 2020: 87–108 (for the NTC); Dabbs *et alii* 2022: 5 (for the same argument): “This is the cemetery of a young, perhaps coerced, labour force who worked in the quarries, at building sites, or within other contexts at Akhetaten, possibly living apart from their natal families.”

38 Stevens and Dabbs 2017: 146. Cf. Dabbs *et alii* 2022: 5: “Burial characteristics here follow the general pattern in other cemeteries, but the guiding principle seems to have been one of expediency, which is evidenced by the high frequency of multiple burials (c. 43% of interments), including individuals wrapped within the same textile and/or burial matting. Further, where graves contain more than one individual, the bodies tend to be stacked one upon another in fairly narrow graves, instead of side-by-side in broad grave pits, as is seen at other cemeteries.”

39 Smith-Guzmán (2015: 624–635; 2017: 6) affirms that recent evidence suggests an even higher prevalence (compared to the Southern Tombs) of malaria in individuals buried at this cemetery, as more than half of the population was affected by that disease.

40 Cf. Stevens 2020: 87–108; Dabbs *et alii* 2022: 3–5. I am grateful to the editor and the anonymous referees for the references and suggestions.

41 For nutritional and dietary deficiency, see Dabbs *et alii* 2015: 39.

42 Stevens *et alii* 2016: 17–18.

43 Stevens *et alii* 2016: 19.

44 Loukianoff 1931: 68–76; Romano 1991: 90; Stevens 2006: 143.

45 Van Dijk 2003: 306. Cf. Sternberg-el Hotabi 1999: 21; Neumann 2016: 248, n. 44.

46 Shaw 2003: 306.

47 Redford 1970: 129, n. 1; Neumann 2016: 247.

48 *Wb.* IV: 560–563 (for *šdj*); Gardiner 1957: 465 (for F 30, “water-skin”), 595 (“to rescue”); Faulkner 1962: 273 (“to rescue; to save”).

49 van Dijk 1989: 62–63; Sternberg-el Hotabi 1999: 31–32; Neumann 2016: 248, n. 45.

50 Redford 2003: 120, 312; Ulanowski 2013: 158–160.

51 Morkot 2005: 210.

52 Bard 2005: 610. Cf. Sternberg-el Hotabi 1999: 21, 31–32; Quack 2002: 713–729, 2018; Van Dijk 2003: 306; Gasse 2004; Saura 2009; Draycott 2011: 123–133; Neumann 2016: 248–250, 254–257; Gestoso Singer 2019: 167–169, nn. 40–52.

53 van Dijk 1989: 62–63 (for amulets and stelae in Deir el-Medina); Hornung 1996 [1982]: 211–212; Neumann 2016: 254–257.

54 Sadek 1988: 61, 63, 129–130; Stevens 2006: 143–144.

55 van Dijk 1989: 63. For the “Eye of Horus,” see Faulkner 1962: 75.

56 Neumann 2016: 249, n. 51.

57 Pinch 1994: 36, 145, fig. 77, 2004: 195; Neumann 2016: 248–249. For example, on the Ramose Stela from Deir el-Medina, Shed carries the *ureus* and holds in his right hand a lion and in his left hand three snakes, three scorpions, two gazelles, and a bow, while standing on two crocodiles (Negm 2002: 101; Neumann 2016: 250, fig. 1, n. 62).

58 Neumann 2016: 249, n. 46.

59 Pinch 1994: 36.

magic.” At the end of the New Kingdom, Horus the Child was very popular and was frequently mentioned and/or depicted on apotropaic stelae, called *cippi* (“*cippi* of Horus” or the “Stelae of Horus on the crocodiles”). These stelae were used to protect people from dangerous animals (such as crocodiles, scorpions, and snakes).⁶⁰ These Horus stelae had predecessors, known as the Shed stelae, that were found in various regions of the Levant (such as Aleppo, Babylon, Byblos, Hamath, and Kition) and were probably carried by merchants and travelers for their own protection, or exported as a result of the exchange circuits that linked Egypt and the Syrian coast.⁶¹ According to Draycott,⁶² these stelae were made in various sizes, some being small enough to be used as amulets by travelers and pilgrims, and others large enough to be erected as monuments in a temple. Saura⁶³ argues that the Shed stelae exhibit a great deal of formal and functional parallels with the stelae of

Horus on the crocodiles. For centuries, these stelae were, according to Saura, the best weapon to combat the threats and attacks of the animals of the river and the desert. Like the stelae of Horus on the crocodiles, the stelae of Shed depict this god of the desert dominating wild and dangerous animals.

During the last years of Akhenaten’s reign, the god Shed, the “Savior,” was worshipped in Amarna.⁶⁴ The increase in the use of the name “Shed” in proper names by the Amarna population appears to confirm the existence of a domestic cult dedicated to this god.⁶⁵

In a chapel in the workmen’s village at Amarna, two stelae dedicated to the god Shed have been found.⁶⁶ In Chapel 525 was found a small stela (25 cm) dedicated to Shed as the “Great God, Lord of Heaven, Lord of the Two Lands, Ruler (...)”.⁶⁷ On this stela, the god is depicted holding a bow and a staff, and a scorpion pierced by two arrows lying at his feet.⁶⁸ Also in this

chapel was found a stela of larger dimensions (44.4 x 32.4 cm) dedicated by the worker Ptahmay and his family to the god Shed and the goddess Isis.⁶⁹ On this stela, Shed holds a staff, a bow, and a quiver, while a scorpion pierced by two arrows lies at his feet. The goddess Isis stands with her right arm outstretched, holding an *ankh* (the symbol of life) towards the face of the god. Depicted in front of the goddess is an altar with the lotus flower and a *Hs*-vase, and the scene is surrounded by formulas of offerings to these gods.⁷⁰

Since excavations in the workmen’s village began in the 1920s,⁷¹ twenty-four chapels have been found.⁷² The chapels are located southeast of the walled village (outside its enclosure) and are closely grouped, implying a level of community

cooperation in their construction.⁷³ These chapels were active during the reign of Akhenaten.⁷⁴ According to the corpus of royal inscriptions, activities in the area continued normally during the reigns of Smenkhkare and Tutankhamun in the late Amarna period.⁷⁵

There is limited evidence of worship of the god Aten in private chapels in the workmen’s village.⁷⁶ In Chapel 524 a papyrus recording the name of Aten was found, and in Chapel 525 the name of Aten was also discovered, although this time on a stela dedicated to Shed and Isis.⁷⁷ These chapels were places of “ancestor cult”⁷⁸ and, in some cases, evidence of the worship of traditional gods and goddesses was found, such as Amun,⁷⁹ Hathor,⁸⁰ Isis,⁸¹ Min, Nut,⁸²

60 Ritner 1993: 106; Hornung 2001 [1999]: 56. On the Metternich Stela (ca. 360–343 BCE), the Horus child is depicted standing on a crocodile and holding in each hand a serpent and a scorpion, along with a lion (in the left hand) and an oryx (in the right hand) (Pinch 1994: 144).

61 Sternberg-el Hotabi 1999: 8, 10, 13, 18, 46, 106; Quack 2002: 713–729 (a review of Sternberg-el Hotabi 1999); Neumann 2016: 249–250, nn. 54–57.

62 Draycott 2011: 123–133.

63 For the “stelae of Shed, the Savior” and the “stelae of Horus on crocodiles”, see Saura 2009: 133–150; Soria Molina 2011: 91 (a review of Saura 2009). For a magic stela (Badisches Landesmuseum Karlsruhe Inv. H 1049; limestone; ca. Nineteenth to Twenty-Second Dynasties) that is inscribed with recitations against dangerous animals, such as crocodiles and snakes, see Quack 2018; and for the stelae of “Horus on Crocodiles” of the Late period, see Gasse 2004.

64 van Dijk 2003: 306. Cf. Sternberg-el Hotabi 1999: 21, 31–32; Neumann 2016: 247, 248, nn. 44–45.

65 *Wb.* IV: 560–563; Brunner 1984: 547–549 (for Shed); Redford 1970: 129, n. 1, 2003: 120, 312; Neumann 2016: 247–248 (for names constructed with Shed, such as Shed-Amun (Ranke 1935 (RPN): I, 332.2); Pashed (RPN I, 119.13); Pashedwj (RPN I, 119.14); Pashedj (RPN I, 119.20)); Leitz 2002 (LGG VII): 148–154; Lenzo 2022: 207–223 (for names, epithets and titles constructed with Shed, such as Shed-Wadjet (Ranke 1935 (RPN): I, 75.11); Pashed-Bastet (RPN I, 119.15); Pashed-Mwt (RPN I, 119.16); Shed-In-hrt (RPN I, 332.1)). Cf. the Stela of Pashed from Deir el-Medina (CGT 50014, Museo Egizio di Torino; Nineteenth Dynasty, ca. 1292–1190 BCE).

66 Peet and Woolley 1923: 96–97.

67 Peet and Woolley 1923: 96, pl. XXVIII.4. Cf. Kemp 1989: 304.

68 Stevens 2006: 143.

69 Cairo Stela JE 46954, in Peet and Woolley 1923: 96–97, 104, pl. XXVIII.1–3.

70 Stevens 2006: 143.

71 Peet and Woolley 1923: 92–108; Weatherhead and Kemp 2007.

72 For example, see Chapel 524, in Stevens 2015: 80, fig. 2.

73 Stevens 2006: 251.

74 Weatherhead and Kemp 2007: 410–412.

75 In the workmen’s village were found twelve rings bearing the name of Smenkhkare; two rings of Meritaten (Petrie and Woolley 1923: 23; Stevens 2012a: 65–66, 315, 431), and forty-seven of Tutankhamun (Petrie and Woolley 1923: 23–28, 68–69, 75–76, 82–83, 85, 87–88, 90; Stevens 2006: 67).

76 In the southern sector of the workmen’s village was found a triangular-shaped fragment of an ostrakon bearing an image of the solar disk with rays that terminate in hands (Aten). One of the hands holds the symbol of life (*ankh*) (Object 836, in Kemp 1983: 15; Stevens 2006: 154, fig. II.6.2). A second fragment was also found, probably with a drawing of a solar disk (Object 1070, in Stevens 2006: 154, fig. II.6.3). Cf. Kemp 1989: 304; Bomann 1991: 66, 68; Stevens 2006: 318. Very far from the village, a small stela showing the Aten alone was found among small houses in the city’s Northern Suburb, challenging the hypothesis that the intermediation of the royal family was a requirement in the cult of Aten (Cairo Stela JE 55458, Object 30/50; 9.7 cm, in House T36.36, in Stevens 2006: 136, fig. 7.5, 2012b: 94, fig. 2.d, 2015: 83, fig. 5).

77 Kemp 1989: 304.

78 The chapels were a place “to experience a sense of communion with spirits” (Weatherhead and Kemp 2007: 407).

79 For inscriptions proving the worship of the god Amun, see Bomann 1991: 58, 66, 68. For a scarab-shaped bead, possibly an amulet, with the name Amun-Ra, see Stevens 2006: 29 (Object 6163).

80 For a fragment of the statue of the goddess Hathor found in Chapel 529, see Peet and Woolley 1923: 100; Bomann 1991: 60, 62, 65, 67–68.

81 Isis is depicted with Shed on a stela found in Chapel 525 (Bomann 1991: 66).

82 Bomann 1991: 61, 63, 68, 104, 107–109, 114 (for T-shaped basins).

Shed,⁸³ Ra, Ra-Harakhte,⁸⁴ Renenutet,⁸⁵ and Wepwawet,⁸⁶ among others.⁸⁷ Traditional divinities may have been worshipped directly in domestic contexts, in private chapels, and perhaps in public spaces.⁸⁸ According to Stevens,⁸⁹ only a few stelae depicting traditional deities have been found in the workmen's village, such as Amun (in his ram form),⁹⁰ Shed, Isis,⁹¹ and the goddess Cobra (Wadjet; Eg. *w3dyt*) with the solar disk.⁹² Also, in Chapel 529 a door jamb inscribed with the name of the god Amun was found,⁹³ and in Chapel 525 a lintel bearing an invocation to Amun.⁹⁴ In the wall paintings of the Main Chapel, the god Amun is invoked using a formula of offerings of the style *htp-din-sw(t)* (lit. "An offering given by the king") as "Amun, the eternally Good Ruler, Lord of Heaven, who made the whole earth."⁹⁵ However, we cannot affirm that these chapels were

exclusive places of worship of these traditional divinities. According to Bomann,⁹⁶ in Amarna only the cults of Amun, Aten, Isis, and Shed were represented by inscriptions. One of the functions, if not the most important, of the chapels was probably the maintenance of "ancestor cults," which extended beyond the funeral itself. Certain anthropomorphic pendants found in the workmen's village, the Northern Suburb, the Main City, the Central City, and Kom el-Nana would indicate ancestor worship.⁹⁷ In Chapel 522 evidence of so-called "communal meals" was found, manifested in the offering of food and drink in large quantities as part of the cult of the ancestors.⁹⁸ Also, the chapels could have served for the veneration of a variety of other deities, and perhaps royal ancestors, although none were necessarily "dedicated" to any particular cult.⁹⁹ According to

83 In Chapel 525, two stelae of Shed have been found; in one of them Shed is depicted along with the goddess Isis (Bomann 1991: 63, 66–68).

84 Bomann 1991: 68 (for a falcon/hawk on an ostrakon and the god's name on jewelry). Cf. Stevens 2006: 293.

85 Bomann 1991: 59, 68 (for the small "shrine" in Annex 450, which is attached to Chapel 561).

86 Bomann 1991: 58, 68 (for the god with a military standard in Chapel 561).

87 Peet and Woolley 1923: 95–98; Bomann 1991: 57–79; Stevens 2006: 291; Weatherhead and Kemp 2007: 410–412.

88 Stevens 2006: 320.

89 Stevens 2006: 138–145.

90 On a limestone stela, found in a room (known as the "bedroom") on Main Street 9 in the workmen's village, the image of the "ram of Amun" is depicted (Peet and Woolley 1923: 66, 80, pl. LIV; Stevens 2006: 138–139, fig. II.5.10).

91 Bomann 1991: 63, 66–68 (for Shed and Isis).

92 On a stela found in the village, two cobras with solar disks are depicted flanking an altar (Peet and Woolley 1923: 66, 85, pl. XXIII.4; Stevens 2006: 139). For the "Cobra goddess," see Faulkner 1962: 56.

93 Peet and Woolley 1923: 95, fig. 13; Bomann 1991: 21.

94 Peet and Woolley 1923: 95, fig. 14; Bomann 1991: 31; Stevens 2006: 252.

95 Peet and Woolley 1923: 91–99.

96 Bomann 1991: 68; Stevens 2006: 252.

97 Stevens 2003: 165.

98 Stevens 2012b: 95–96, fig. 6.

99 Bomann 1991: 57–68.

Stevens,¹⁰⁰ the chapels were probably regarded as family monuments, rather than public chapels.

In her book *Living with the Dead*, Harrington¹⁰¹ offers a brief introduction to the iconography, terminology, and material culture that experts conventionally group under the heading of "ancestor worship" in ancient Egypt. She also introduces a distinction between mortuary ritual/cult and ancestor worship, defining mortuary cult as "ritual action in relation to the dead," expressed through offerings, festival meals, and the creation of certain types of monuments, excluding burials. By contrast, ancestor worship is described primarily in terms of "rite of passage ceremonies," as attested through burials. Evidence of mortuary cult includes letters to the dead, cult statues, ancestor busts, stelae, offering tables, and banquet scenes. Finally, Harrington asserts that mortuary cults rarely continued beyond two generations, equating this cycle of remembrance and forgetting, marked by cessation of the cult, with the practical limits of living memory. Cases in which mortuary cults might persist for longer periods (i.e. five and thirteen generations) are explained as "a form of ancestor worship" and as "an indicator of social position and (family) background."

The general concerns inherent in everyday life probably figured prominently among the motivations behind religious behavior – misfortune, accidents at work, illness, and unhappiness, all attributed to various sources. We might expect religious responses to adjust according to the level of threat, and to vary, in particular, in the level of active input required of human participants. Probably, much religious behavior was directed towards the general protection of one's person and general welfare through the use of personal amulets, in particular rings bearing the "eye of Horus" against the "evil eye."¹⁰² In the workmen's village at Amarna, amulets of gods (such as Bes)¹⁰³ and goddesses (such as Taweret,¹⁰⁴ Isis,¹⁰⁵ and Sekhmet¹⁰⁶) who served as protectors of the home and/or its residents were found. Amulets were not a mere instrument of exorcism to ward off an evil spirit, but rather the means to restore the positive role of ancestors as protectors of the home.¹⁰⁷ The corpus of jewelry includes a small number of images of dangerous animals, such as snakes and scorpions – potential threats against which these objects were used for self-protection. Arm- or leg-shaped pendants could have ensured continued physical abilities by warding off illness or accidents, or by increasing

100 Stevens 2015: 80.

101 Harrington 2010: 34–37, 49–64, 125, nn. 15–17.

102 Seven hundred rings and one hundred pendants, amulets, and beads with the "Eye of Horus" were found at Amarna; fifteen of them were located in the workmen's village (Petrie and Woolley 1923: 21–23, 28, 32, 72–73, 76, 86; Stevens 2006: 72, 323).

103 Ninety jewelry objects bearing the figure of Bes were found in the village (Stevens 2006: 31–32). For the fragments of pendants of the god Bes found in the main quarry of the workmen's village, see Stevens 2006: 316, table III.4.2.

104 Fourteen amulets of the goddess Taweret were found in the village (e.g. Object 7249, a fragment of a small amulet, in Stevens 2006: 39–40).

105 A small fragment of an amulet, probably of the goddess Isis wearing an *ureus* with the solar disk and horns, similar to other amulets of this goddess, was found in the village (Object 3169, in Stevens 2006: 36).

106 Part of a head – probably of the goddess Sekhmet – that corresponded to a pendant (Object 4725, in Stevens 2006: 38) was found in the village.

107 Stevens 2012a: 445.

speed or strength in diseased or damaged limbs.¹⁰⁸ The god Ptah, sometimes worshipped as the patron saint of craftsmen, was depicted on small stelae and plaques, and on some jewelry items.¹⁰⁹

In sum, the discovery of twenty-four private chapels dedicated to the worship of the ancestors and of gods and goddesses, such as Isis, Amun, Aten and Shed, as well as the large number of amulets used by the inhabitants of Amarna, found in a domestic context, allows us to analyze the changes that affected popular religion before the abandonment of the city.

Conclusions

The textual evidence analyzed above allow us to confirm the existence of several epidemics and diseases that affected Egypt and other regions of the Levant during the Late Bronze Period.

The city of Amarna, ancient Akhetaten (the “Horizon of the solar disk, Aten”), was the residence of the royal court and a population of about 20,000–50,000 people.¹¹⁰ Occupied only for a brief period, it was abandoned shortly after Akhenaten’s death, some twelve years after its founding, during the reign of Tutankhaten.¹¹¹ The existence of various diseases that spread easily in the poor living conditions of the workmen of the tombs may explain – among other factors – the short period of occupation of the new capital (ca. 1350–1330 BCE).

There is no direct archaeological evidence that the bubonic plague affected the inhabitants of the Workmen’s Village. Nevertheless, the site had potentially all the conditions and vectors – humans, rats, cats, and fleas– for endemic diseases. We do not know exactly how many workers lived in this village. According to Stevens,¹¹² if we assume that the average family household contained about five people, the population of the workmen’s village can be estimated at about 350 individuals, in addition to the individuals who integrated the domain of the superintendent in charge. Also, we do not know exactly how many workers died because of heavy labor or from different diseases in the village.

Recent excavations in the Southern and Northern Tombs indicate a considerable mortality rate among the population due to a combination of factors, such as heavy workloads, dietary deficiency, and diseases. Stevens¹¹³ affirms that “at the southern cemetery, the larger burial ground, we can confidently model a cemetery population of around 6,000 individuals. This cemetery probably saw about an interment a day over the course of the occupation of the city; death must have been a pervasive aspect of city life.” Recent studies conducted on skeletons found in the Northern Tombs¹¹⁴ reveal a combination of lesions (such as *cribra orbitalia* and spinal porosity), due to heavy labor, that have been previously identified as indicators of malarial infection.

Malaria affected several members of the royal family. Currently, it is estimated that symptoms

begin nine to thirty days after the first malaria infection. The most severe and complicated cases of malaria are almost always caused by infection with *Plasmodium falciparum*, the same organism that affected Tutankhamun and other members of the royal family. This type of tropical malaria is the cause of 80% of all malaria infections and 90% of deaths from the disease in sub-Saharan Africa. In other areas of the world, mortality rates are still relatively high (10 to 50%).¹¹⁵

There is no direct archaeological evidence of deaths for bubonic plague at Amarna. However, Akkadian and Hittite texts attest a lethal epidemic that spread from Egypt to Syria and the land of Hatti. Currently, the death rate of bubonic plague is estimated to be between 30 and 90% (depending on treatment) and death occurs within 24 or 48 hours (without treatment) or, in prolonged cases, within ten days of contracting the disease.¹¹⁶ A recent study by Smith-Guzmán¹¹⁷ indicates that malaria best fits the profile for the so-called “Hittite Plague,” as it has a long incubation period of about two weeks. The Hittite texts confirms that the Egyptian prisoners (already sick or carrying bacteria of the disease) entered the Hittite capital and spread the illness, where “People have been dying in Hatti for twenty years.”¹¹⁸ Paleo-climatic studies¹¹⁹ reveal that the dominant vector of malaria in Anatolia is the mosquito *Anopheles sacharovi*, whose ability to overwinter would have allowed the protozoan parasite *Plasmodium falciparum* to take hold in the region for years.

The diseases may have been interpreted as a punishment sent by the ancient gods whom Akhenaten had ignored, and, consequently, it may have contributed – among other socio-economic and political factors – to the end of the cult of Aten and the abandonment of the new capital. It was probably the uncertainty experienced in this new capital that led to the emergence of the god Shed, the “Savior,” who sought to save the Egyptians from illness, misfortune, and hard work. This god would have been seen as a source of individual salvation for those in need when the king and/or state were absent.¹²⁰

The recent discoveries at Amarna allow us to reach an integrative vision of the practices of popular worship of ancestors and gods, understood as a complex economic-social and political phenomenon during a period of changes and transition before the abandonment of the city.

Acknowledgements

I am grateful to the editors and the anonymous peer-reviewers for the suggestions and references. This paper is part of the Project “Transiciones socio-históricas en el antiguo Egipto: contextos y prácticas (ca. 1500-500 a.C.) / “Socio-historical transitions in ancient Egypt: contexts and practices (ca. 1500-500 BCE)” (2022-2024), directed by Dr. Roxana Flammini (Pontificia Universidad Católica Argentina, CONICET, Universidad Nacional de Luján).

¹⁰⁸ For example, the leg-shaped amulet found in the main quarry of the workmen’s village (Kemp 1983: 7–13; Stevens 2006: 316, table III.4.2; 323).

¹⁰⁹ Stevens 2006: 324.

¹¹⁰ Kemp *et alii* 2013: 65 (for a population of about 20,000–30,000 people); Kemp 2012: 271–272; Stevens 2016: 1 (for 20,000–50,000); and Stevens *et alii* 2016: 14 (for 30,000–50,000).

¹¹¹ Kemp 1995: 446–448; Stevens 2016: 1.

¹¹² Stevens 2012a: 421.

¹¹³ Stevens *et alii* 2016: 17.

¹¹⁴ Stevens and Dabbs 2017: 146; Dabbs *et alii* 2022: 3–5.

¹¹⁵ Bartoloni and Zammarchi 2012.

¹¹⁶ Prentice and Rahalison 2007: 1196–1207.

¹¹⁷ Smith-Guzmán 2017: 7.

¹¹⁸ CTH 378.2, §1, in Singer 2002: 57.

¹¹⁹ Kaniewski *et alii* 2013; Smith 2015: 86.

¹²⁰ Hornung 1996 [1982]: 211–212.

Bibliographical references

- BARD, K.
2005 *Encyclopedia of the Archaeology of Ancient Egypt*. London.
- BARTOLONI, A.; ZAMMARCHI, L.
2012 “Clinical Aspects of Uncomplicated and Severe Malaria”, *Mediterranean Journal of Hematology and Infectious Diseases* 4 / 1: online e2012026. doi:10.4084/mjihid.2012.026. Epub 2012 May 4. PMID: 22708041; PMCID: PMC3375727.
- BOMANN, A.
1991 *The Private Chapel in Ancient Egypt*. London.
- BRUNNER, H.
1984 “Shed”, in: W. Helck and W. Westendorf (eds.): *Lexikon der Ägyptologie*, Wiesbaden: vol. 5: 547–549.
- CTH = *Catalogue of Hittite Texts/Catalogue des textes hittites*, https://www.hethport.uni-wuerzburg.de/CTH/index_en.php
- DABBS, G.R.; ROSE, J.C.; ZABECKI, M.
2015 “The Bioarchaeology of Akhetaten: Unexpected Results from a Capital City”, in: S. Ikram, J. Kaiser and R. Walker (eds.): *Egyptian Bioarchaeology: Humans, Animals, and the Environment*, London: 31–40.
- DABBS, G.; STEVENS, A.; MÉRAT, A.
2022 “Teasing Identity from Burial Treatment among the Non-elite at Amarna”, *Horizon, The Amarna Project Newsletter* 22: 3–5.
- DAVIES, N. DE G.
1905a *The Rock Tombs of El Amarna, Part II, The Tombs of Panehesy and Meryra*. London.
1905b *The Rock Tombs of El Amarna, Part III, The Tombs of Huy and Ahmes*. London.
- DODSON, A.
2009 *Amarna Sunset: Nefertiti, Tutankhamun, Ay, Horemheb and the Egyptian Counter-reformation*. Cairo.
- 2012 s.v. “Akhenaten (Amenhotep IV)”, in: R. Baginall, K. Brodersen, C. Champion, A. Erskine and S. Huebner (eds.): *The Encyclopedia of Ancient History*, Oxford: 1–3.
- DRAYCOTT, J.
2011 “Size Matters: Reconsidering Horus on the Crocodiles in Miniature”, *Pallas* 86: 123–133.
- ERMAN, A.; GRAPOW, H. (EDS.)
1926–1931 *Wörterbuch der ägyptischen Sprache*. Leipzig. 5 vols.
- FAULKNER, R.
1962 *A Concise Dictionary of Middle Egyptian*. Oxford.
- GARDINER, A.
1957³ *Egyptian Grammar*. London.
- GASSE, A.
2004 *Les stèles d’Horus sur les crocodile*. Paris.
- GESTOSO SINGER, G.
2017 “Beyond Amarna: The ‘Hand of Nergal’ and the Plague in the Levant”, *UF* 48: 223–272.
2019 “Los Dioses de la Pestilencia en el Discurso Inter-cultural de la Época de El Amarna”, *AntOr* 17: 157–218.
2021 “Peste Bubónica y Malaria en El Amarna”, in: R. Rodríguez (ed.): *Sociedades Antiguas del Creciente Fértil: Territorios, Memorias e Identidades Culturales*, Buenos Aires: vol. 3, tomo 1, 51–74.
- HARRINGTON, N.
2010 *Living with the Dead. Ancestor Worship and Mortuary Ritual in Ancient Egypt*. Oxford.
- HAWASS, Z.; GAD, Y.; ISMAIL, S.; KHAIRAT, R.; FATHALLA, D.; HASAN, N.; AHMED, A.; ELLEITHY, H.; BALL, M.; GABALLAH, F.
2010 “Ancestry and Pathology in King Tutankhamun’s Family”, *Journal of the American Medical Association* 303: 638–647.
- HELCK, W.
1971 *Die Beziehungen Ägyptens zu Vorderasien im 3. und 2. Jahrtausend v. Chr.* Wiesbaden.
- HORNUNG, E.
1996 [1982] *Conceptions of God in Ancient Egypt. The One and the Many*. New York.
2001 [1999] *The Secret Lore of Egypt: Its Impact on the West*. New York.
- KANIEWSKI, D.; VAN CAMPO, E.; GUIOT, J.; LE BUREL, S.; OTTO, T.; BAETEMAN, C.
2013 *Environmental roots of the Late Bronze Age crisis*. Oxford. Online: PLoS ONE 8(8): e71004. <https://doi.org/10.1371/journal.pone.0071004>
- KEMP, B.
1983 “Preliminary Report on the el-‘Amarna Expedition, 1981–1982”, *JEA* 69: 4–24.
1989 *Ancient Egypt: Anatomy of a Civilization*. London, New York.
1995 “Outlying Temples at Amarna”, in: B. Kemp (ed.): *Amarna Reports VI*, London: 411–462.
2012 *The City of Akhenaten and Nefertiti: Amarna and its People*. London.
- KEMP, B.; ZINK, A.
2012 “Life in Ancient Egypt. Akhenaten, the Amarna Period, and Tutankhamun”, in: M. Harbec, K. Von Heyking and H. Schwarzberg (eds.): *Sickness, Hunger, War, and Religion: Multidisciplinary Perspectives*, Rachel Carson Center Perspectives 3, Munich: 9–24.
- KEMP, B.; STEVENS, A.; DABBS, G.; ZABECKI, M.; ROSE, J.
2013 “Life, Death and Beyond in Akhenaten’s Egypt: Excavating the South Tombs Cemetery at Amarna”, *Antiquity* 87: 64–78.
- KOZLOFF, A.
2006 “Bubonic Plague in the Reign of Amenhotep III?”, *Kemet* 17 / 3: 36–46.
2012 *Amenhotep III. Egypt’s Radiant Pharaoh*. New York.
- KUB = GÖTZE, A.; GÜTERBOCK, H.; SCHIELE, J. (EDS.)
1923 *Keilschrifturkunden aus Boghazköi*. Berlin.
- LEITZ, C. (ED.)
2002 *Lexikon der ägyptischen Götter und Götterbezeichnungen (Orientalia Lovaniensia Analecta 116)*. Leuven: Bd. 7: Š-d.
- LENZO, G.
2022 “Divine Names and Titles in Ancient Egypt: The Case of the God Shed”, *Archiv für Religionsgeschichte* 23 / 1: 207–223.
- LOUKIANOFF, G.
1931 “Le dieu Ched. L’évolution de son culte dans l’ancienne Égypte”, *BIE* 13: 67–84.
- MORAN, W.
1992 *The Amarna Letters*. Baltimore.
- MORKOT, R.
2005 *The Egyptians: An Introduction*. London.
- NEGM, M.
2002 “A Stela of Ramose from Deir el-Medina in the Cairo Museum”, *Discussions in Egyptology* 54: 97–104.
- NEUMANN, M.
2016 “(El) Šadday – A Plea for an Egyptian Derivation of the God and Its Name”, *Welt des Orients* 46 / 2: 244–263.
- PANAGIOTAKOPULU, E.
2001 “Fleas from Pharaonic Amarna”, *Antiquity* 75: 499–500.
2004 “Pharaonic Egypt in the Origin of Plague”, *Journal of Biogeography* 31 / 2: 269–275.
- PAPADOPOULOU, G.
2018 “Now I Have Sent you 500 (Talents) of Copper. The Amarna Letter EA 35 from the King of Alasiya to the King of Egypt”, *AURA* 1: 61–67.
- PEET, T.E.; WOOLLEY, C.L.
1923 *The City of Akhenaten, I: Excavations of 1921 and 1922 at el-‘Amarna*. London.
- PINCH, G.
1994 *Magic in Ancient Egypt*. London.

- 2004 *Egyptian Mythology: A Guide to the Gods, Goddesses, and Traditions of Ancient Egypt*. New York.
- PRENTICE, M.; RAHALISON, L.
2007 “Plague”, *The Lancet* 369 / 9568: 1196–1207.
- QUACK, J.
2002 Review of “H. Sternberg, *Untersuchungen zur Überlieferungsgeschichte der Horusstelen*, Wiesbaden”, *OLZ* 97: 713–729.
2018 *Eine magische Stele aus dem Badischen Landesmuseum Karlsruhe (Inv. H 1049) (Abhandlungen der Heidelberger Akademie der Wissenschaften 58)*. Heidelberg.
- RAINEY, A.F.
2015 *The El-Amarna Correspondence. A New Edition of the Cuneiform Letters from the Site of El-Amarna based on Collations of all Extant Tablets (HdO 110)*. Leiden, Boston. 2 vols.
- RANKE, H.
1935 *Die Ägyptischen Personennamen*, Bd. 1: *Verzeichnis der Namen*. Glückstadt.
- REDFORD, D.
1970 *A Study of the biblical Story of Joseph (Genesis 37–50) (VTSup 20)*. Leiden.
1984 *Akhenaten, the Heretic King*. Princeton.
2003 *The Oxford Guide: Essential Guide to Egyptian Mythology*. Oxford.
- RITNER, R.
1993 *The Mechanics of Ancient Egyptian Magical Practice (SAOC 54)*. Chicago.
- ROBERTSON, W.
2007 *Drought, Famine, Plague and Pestilence. Ancient Israel's Understandings of and Responses to Natural Catastrophes*. Doctoral Dissertation, Drew University.
- ROMANO, J.
1991 “A Prince or a God at El Amarna? Reconstructions of an Earlier Opinion”, in: D. Forbes (ed.): *Amarna Letters: Essays on Ancient Egypt, c. 1390-1310 BC*, San Francisco: 1, 86–93.
- SADEK, A.
1988 *Popular Religion in Egypt during the New Kingdom (HÄB 27)*. Hildesheim.
- SAURA, D.
2009 *Las estelas mágicas de ‘Horus sobre los cocodrilos’. Formación, evolución y sentido de un tipo iconográfico (Thema Mundi 2)*. Madrid.
- SEYFRIED, F.
2012 “Nefertiti: What remains but beauty?”, in: F. Seyfried (ed.): *In the light of Amarna. 100 years of the Nefertiti discovery*, Berlin: 189–194.
- SHANKS, G.; HAY, S.; BRADLEY, D.
2008 “Malaria’s Indirect Contribution to All-cause Mortality in the Andaman Islands during the Colonial Era”, *The Lancet Infectious Diseases* 8: 564–570.
- SHAW, I. (ED.)
2003 *The Oxford History of Ancient Egypt*. Oxford.
- SHEPPERSON, M.
2017 “Did children build the ancient Egyptian city of Amarna?”, *The Guardian*, June 6th, 2017.
- SINGER, I.
2002 *Hittite Prayers (WAW 11)*. Atlanta.
- SMITH, N.
2015 *The Paleoepidemiology of Malaria in the Ancient Near East*. Doctoral Dissertation, University of Arkansas.
- SMITH-GUZMÁN, N.
2015 “The Skeletal Manifestation of Malaria: An Epidemiological Approach Using Documented Skeletal Collections”, *American Journal of Physical Anthropology* 158 / 4: 624–635.
2017 “Tracking Malaria at Amarna”, *The Akhetaten Sun* 23 / 1: 2–7.
- SMITH-GUZMÁN, N.; DAVIES, H.; ROSE, J. (EDS.)
2016 “Malaria at Amarna, Egypt: Evidence from the South Tomb Cemetery”, paper presented in Atlanta, American Association of Physical Anthropology, April 14th, 2016. Online: <https://www.academia.edu/20385680/>

- Malaria_at_Amarna_Egypt_Evidence_from_the_South_Tombs_Cemetery
- SORIA MOLINA, D.
2011 Reseña de “D. Saura, 2009. *Las estelas mágicas de ‘Horus sobre los cocodrilos’. Formación, evolución y sentido de un tipo iconográfico, Thema Mundi 2*, Madrid, pp. 279”, *Kubaba* 2: 90–93.
- STERNBERG-EL HOTABI, H.
1999 *Untersuchungen zur Überlieferungsgeschichte der Horusstelen. Ein Beitrag zur Religionsgeschichte Ägyptens im 1. Jt. v. Chr. Teil I: Textband (ÄgAbh 62)*. Wiesbaden.
- STEVENS A.
2003 “The Material Evidence for Domestic Religion at Amarna and Preliminary Remarks on its Interpretation”, *JEA* 89: 143–168.
2006 *Private Religion at Amarna. The Material Evidence (BAR International Series 1587)*. Oxford.
2012a *Akhenaten’s Workers: The Amarna Stone Village Survey, 2005–2009*, I. *The Survey, Excavations and Architecture (EES Excavation Memoir 100)*. London.
2012b “Private Religion in the Amarna Suburbs”, in: F. Seyfried (ed.): *In the Light of Amarna: 100 Years of the Nefertiti Discovery*, Berlin: 92–97.
2015 “Visibility, Private Religion and the Urban Landscape of Amarna”, *ARC* 30 / 1: 77–84.
2016 s.v. “Tell el-Amarna”, in: W. Wendrich (ed.): *UCLA Encyclopedia of Egyptology*, Los Angeles: 1–37.
2020 *Amarna: A Guide to the Ancient City of Akhetaten*. Cairo.
- STEVENS, A.; DABBS, G.; ROSE, J.
2016 “Akhenaten’s People: Excavating the Lost Cemeteries of Amarna”, *CWA* 78: 14–21.
- STEVENS, A.; DABBS, G.
2017 “The North Tombs Cemetery Excavations and Skeletal Analysis”, in: B. Kemp (ed.): *Tell el-Amarna, spring 2017*, *JEA* 103 / 2: 137–149.
- TYLDESLEY, J.
2003 *Nefertiti. Słoneczna królowa Egiptu*, translated by J. Aksamit. Warsaw.
- ULANOWSKI, K.
2013 “God Reshef in the Mediterranean”, in: L. Bombardieri, A. D’Agostino, G. Guarducci, V. Orsi and S. Valentini (eds.): *SOMA 2012. Identity and Connectivity: Proceedings of the 16 Symposium on Mediterranean Archaeology, Florence, Italy, 1–3 March 2012 (BAR International Series 2581 / I)*, Oxford: 157–164.
- VAN DER PERRE, A.
2014 “The Year 16 graffito of Akhenaten in Dayr Abū Ḥinnis: A Contribution to the Study of the Later Years of Nefertiti”, *JEH* 7: 67–108.
- VAN DIJK, J.
1989 “*The Canaanite God Ḥauron and his Cult in Egypt*”, *GM* 107: 59–68.
2003 “The Amarna Period and the Later New Kingdom (c. 1352–1069 B.C.)”, in: I. Shaw (ed.): *The Oxford History of Ancient Egypt*, Oxford: 265–307, 460–462.
- WEATHERHEAD, F.; KEMP, B.
2007 *The Main Chapel at the Amarna Workmen’s Village and its wall paintings (EES Excavation Memoir 85)*. London.