



AT THE BORDER BETWEEN EGYPT AND NUBIA: SKELETAL MATERIAL FROM EL-HESA CEMETERY 2

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ABSTRACT

In 1924, the American Museum of Natural History (AMNH) in New York acquired a large collection of both archaeological and documentary material that had belonged to Austrian medical doctor, anthropologist and collector Felix von Luschan. Colloquially termed “The von Luschan Collection,” a large portion of this collection consisted of human skeletal remains. Of these remains there are currently 339 individuals designated to the “el-Hesa” sub-collection, which is mainly made up of cranial and associated postcranial elements.

Uncovered in 1907 at Cemetery 2 of el-Hesa, one of the islands of the first cataract of the Nile, this skeletal collection illustrates the difficulties of using osteological material coming from Nubia, at the edge of the Egyptian territory. In particular, physical anthropologists continue to use outdated chronologies when discussing the age of the collection. This review of the el-Hesa collection provides an updated historical context for the remains, including new evidence dating them from the Late Roman period to the beginning of the Christian era.

INTRODUCTION

In a series of articles produced in the last ten years,¹ the historical context of Nubian populations in Antiquity, the understanding of the sites from which the osteological collections were taken, and even the presentation of the general history of the region has been inaccurate or incomplete. The references that were used to assist in this understanding date to the 1970s rather than the 2000s, sometimes to the 1930s or 1910s, and also include names and publications that have no standing within Nubian Studies, a field that has made groundbreaking progress in the last forty years.

It is important to note that at present much physical anthropological fieldwork in Nubia is conducted by scientists with intimate ties to archaeology. Unfortunately, their results are often used in comparative studies that have routinely ignored updated historical contexts. Exceptions include studies by Buzon² that concern the New Kingdom colonization of Lower and Middle Nubia. But for Late Antiquity,³ and the Christian era,⁴ comparative studies have continuously used outdated terminology and definitions of time periods that cannot be found in the historical literature. More importantly they confuse arguments made in the physical anthropological literature.

The lack of historical background for many physical anthropologists studying skeletal collections originating from Nubia is partly due to the nature of Nubian Studies and their relation to Egyptology. While many publications related to Nubia are not published in mainstream journals, they do exist in the form of monographs, proceedings of international conferences, as well as exhibition catalogues. Even without adding the knowledge that can be gained from Egyptology and non-English language sources, anthropologists have been amiss in using such sources. Their research would gain from better historical contexts for the regions from which the comparative collections were taken, since these point at possible biological admixture. A reinterpretation of the material and results from early studies is much overdue. The Cemetery 2 at el-Hesa (Figure 1) illustrates these needs, and gives a chance to explore an almost forgotten skeletal collection from Nubia.

THE VON LUSCHAN COLLECTION AT THE AMNH

In May 1924, the AMNH accessioned the von Luschan Collection,⁵ which included some 5,000 human crania, 200 complete skeletons, a study collection and a private library. The materials have the Museum accession number 25102, and the

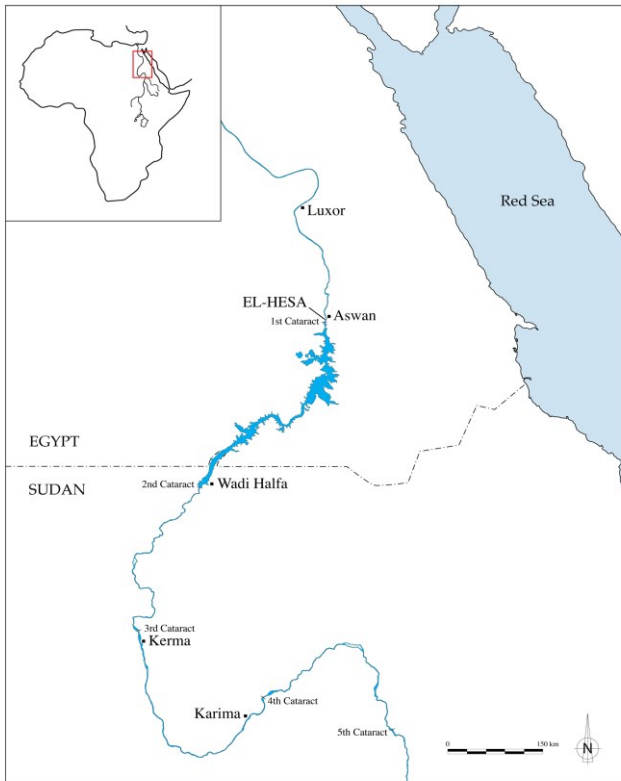


Figure 1: General map of Upper Egypt and Nubia

Anthropology Division accession number 1924-37 (representing the 37th accession for the year 1924).

The von Luschan Collection, though originally negotiated as a purchase that was to include 6,000 photographs and 500 crania and skeletons, was a gift of Felix Warburg. Warburg was acting as von Luschan's broker in matters related to the sale of the collection, at the time of von Luschan's death in February 1924.

Part of the von Luschan collection comes from an excavation conducted in 1907 at Cemetery 2 on the Egyptian island of el-Hesa, in the area of the first cataract (Figure 2). However, there is some skeletal material from Cemetery 2 mentioned in von Luschan's Field Notebooks not found in the AMNH collection. On February 19, 1924, Emma von Luschan stated that some skulls were unnumbered and unmarked, and that she would postpone sending those to the Museum. So far, there is no evidence that these skulls became part of the AMNH collection.

Von Luschan received only part of the skeletal collection from Cemetery 2, some remains having been taken from the site prior to him being granted permission to remove material. The anatomists in charge, on behalf of the Egyptian government, had been asked to solve questions about the ethnicity of the remains, and had already sent some of the skeletons to Cairo for assessment. After von Luschan took possession of his allotment, he requested Dr. Rudolf Goldbarth, a German dentist, to address these questions of ethnicity. It appears that all skeletal remains with numbers 3101-3194 were given to him for examination and measurement,⁶ most of them being in the AMNH collection.

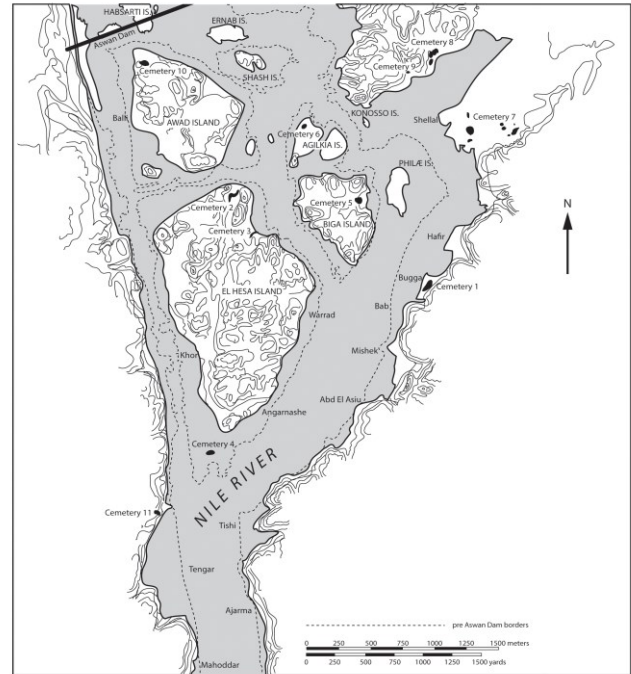


Figure 2: Map of el-Hesa and surrounding islands (after Reisner 1910, Plan 2)

Numbers and texts penciled on some of the crania in the sub-collection cannot be correlated with any known work on the skulls other than the Goldbarth investigation, and appear to pre-date the sub-collection's arrival at the AMNH.

The AMNH collection currently consists of the remains of 339 individuals, predominantly adults. Apart from the el-Hesa material stored at the AMNH in New York, Cemetery 2 remains are also found in the United Kingdom at the Duckworth Laboratory / University of Cambridge, at the KNH Centre for Biomedical Egyptology / University of Manchester, at the London Natural History Museum, as well as in Denmark, at the Anthropological Laboratory / University of Copenhagen.

EL-HESA CEMETERY 2

In 1907, the archaeological survey of Nubia, placed under the aegis of the Egyptian government, began in the region of the first cataract, where the Island of el-Hesa is located. Soon to be submerged as a result of raising the height of the Aswan Dam, the area was thoroughly examined by archaeologists, producing in a very short time period a huge amount of artifacts and human remains, studied in situ or sent to various destinations. Work on the dam occurred between 1908 and 1911, and George A. Reisner, an American Egyptologist from Harvard, was chosen as a director for the scientific expedition. For the study of the physical remains, he hired Grafton Elliot Smith, an Australian-British anatomist of the Government School of Medicine in Cairo, and Frederic Wood Jones, of the University of London. Despite the early date of this archaeological survey, the team produced a remarkable and

promptly published anthropological documentation,⁷ including cemetery plans, photographs of graves and skeletons, as well as drawings of skull morphology. Questions concerning cultural interpretation, chronology and burial practices were frequently discussed, and reports on medical anomalies and an evaluation of the general condition of the populations were regularly produced. In particular, an effort was made to answer the question related to the possible admixture of the Nubian population with other external groups.

aspect given by the natural process of desiccation of soft tissues in a dry environment.

Many graves had only one individual buried, while some were found with multiple burials and considered as family tombs. These collective graves often had a substructure in the shape of a large vault made of bricks. When present, the superstructure consisted of a single room construction or chapel, sometimes with one or more niches in the walls, preceded by a colonnade of four to six pillars built on a small terrace. Common graves though, were simply made of a narrow, oval or rectangular pit covered with either a superstructure built with bricks or stone slabs. A third of the tombs seemed to have no construction at all. Burials were mostly oriented East-West, with individuals placed in a supine position, head to the west. Only a minority of individuals was found lying on the side, with their legs slightly bent. Some individuals were wearing a linen tunic and were wrapped in a shroud, tied with a cord.

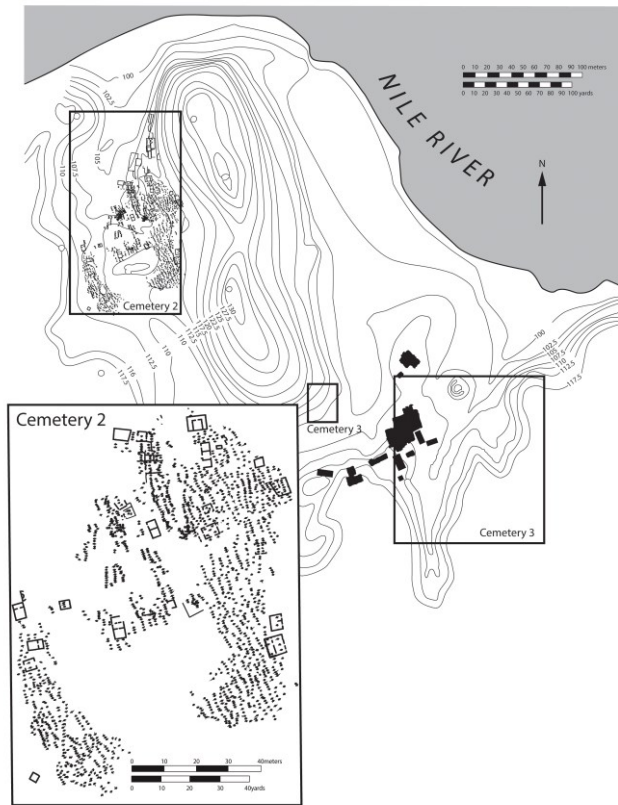


Figure 3: Map of Cemeteries 2 and 3 (after Reisner 1910, Plans 7 and 8)

The island of el-Hesa had originally three ancient burial grounds known as Cemetery 2, 3 and 4. The excavation started on September 25, 1907, and by November 30, Cemeteries 2 and 3 were completely excavated, while for Cemetery 4, by that time completely inundated, it was concluded that it had been sufficiently examined. Cemetery 2 is located at the top end of a valley that runs across the island from north to south, surrounded by granite hills (Figure 3). Among the five cemeteries dated to the Christian Period and excavated during the survey, it was by far the largest, with 1,625 graves for approximately 2,000 bodies. However, considering the destructions that occurred in the lower levels of the site, and the possible connection with part of the nearby Cemetery 3, it probably contained over 3,000 burials. Corpses were noted as “well preserved” and sometimes referred to as “mummies”, though this simply corresponded to the general

CHRONOLOGICAL AND HISTORICAL CONTEXT

One of the main questions concerning the human remains of Cemetery 2 is their chronological attribution. According to Reisner,⁸ they belong to the Christian Period for which he considers the time frame to be between 500 AD and 1200 AD. Unfortunately, the few publications in physical anthropology that include the AMNH el-Hesa remains have used this century-old assessment as part of a broader and out-of-date chronology:

- Early Dynastic Period (The first three or four dynasties / approximately A-group in Nubia)
- Old Empire (Fourth to Sixth Dynasties / approximately B-group in Nubia)
- Middle Empire (Seventh to Sixteenth Dynasties / approximately C-group in Nubia)
- New Empire (Seventeenth to Twentieth Dynasties / D-group)
- Late Period (Twentieth to Thirtieth Dynasties / 900 — 332 BC)
- Ptolemaic-Roman Period (332 BC — 300 AD)
- Byzantine Period (including X-group in Nubia / 200 — 500 AD)
- Coptic Period (500 — 1100 AD)

Such a chronological sequence is no longer appropriate, not only because of the incorrect dates, but also because it refers to cultural entities such as B-group and D-group that are no longer recognized as valid. It is now generally accepted⁹ that the chronology for Egypt should be seen as follows:

- Early Dynastic (3100 – 2686 BC)
- Old Kingdom (2686 – 2181 BC)
- First Intermediate Period (2181 – 2055 BC)
- Middle Kingdom (2055 – 1650 BC)
- Second Intermediate Period (1650 – 1550 BC)

- New Kingdom (1550 – 1069 BC)
- Third Intermediate Period (1069 – 747 BC)
- Late Period (747 – 332 BC)
- Ptolemaic Period (332 – 30 BC)
- Roman Period (30 BC – 395 AD)
- Byzantine Period (395 – 640 AD)
- Islamic Period (640 AD – present)

Active since the mid-first century AD in Alexandria, Christian communities developed rapidly in Egypt under the Roman administration, despite frequent persecutions, particularly at the beginning of the fourth century AD, under the reign of Diocletian. Dated to the Christian period,¹⁰ the Cemetery 2 at el-Hesa is assimilated to a period starting from the death of the emperor Theodosius I (395 AD), and ending with the Arab conquest of Egypt in 640 AD.

In general, for that period, no material was placed into the grave, other than clothing and personal ornaments. But some objects found inside and at the surface of some undisturbed graves from Cemetery 2 clearly indicate the survival of some pagan traditions. Among the artifacts deposited during the funeral are, for example, dolls, ceramics, glassware, seals and a blue-glazed faience box decorated with a Hathor head. Two seemingly mundane objects are of particular interest regarding the discussion on chronology.

The first is a coin,¹¹ found on grave 200 with a palm branch and a lead seal representing an antelope. On its obverse side (Figure 4) is the bust of an Emperor laureate, draped (and cuirassed?) looking to the right. As the surface is eroded, only part of the inscription is visible, but it is possible to reconstruct: [THEO] DO-SIVS [P F AVG]. On the reverse side is the representation of a Victory advancing left, head turned back, carrying a trophy and dragging a prisoner. The inscription can be read as follows: [S]ALVS REI[PUBLICAE]. The exergue is hardly visible, and it is difficult to know in which city the coin was struck. The Christogram on the left of the Victory is clearly visible and evokes the crucifixion of Jesus. The coin represents Theodosius I (347 – 395 AD), the last emperor to have ruled over the western and eastern halves of the Roman Empire. He was known to have promulgated in 380 AD the Edict of Thessalonica that made Christianity the state religion of the Empire.

The second is a faience die.¹² This twenty-sided die shows the Greek letters alpha through epsilon. Such dice are consistently found in Greco-Roman contexts,¹³ although most examples in the literature have their provenience in Egypt. The el-Hesa die is most likely from the end of the Hellenistic period in Egypt. Perdrizet¹⁴ has shown that similar examples found in Alexandria point to this period based on the shapes of the twenty Greek letters. The original use of these dice is not known, ranging from divinatory to game practices. Their appearance with Greek letters is the most common. Their occurrence is confined to a specific time period as opposed to the more ubiquitous cubic dice with dots numbering from one to six. The latter are found from the third millennium BC onwards from Mesopotamia to the Mediterranean.¹⁵ South of

Egypt, cubic dice have been attested no earlier than the Meroitic period but they continue to be in use into the Christian and later periods as well. The occurrence of a twenty-sided die at el-Hesa is, therefore, an indication of a pre-Christian context.



Figure 4: Bronze coin (after Reisner 1910, Pl. 72i)

The population buried in el-Hesa thus belongs to the transition in which paganism was on the decline and Christianity on the rise, between the fourth century and early seventh century AD. The fact that most of the tombs have no grave goods indicates that people from el-Hesa had already begun to distance themselves from pagan practices, although the nearby temple of Isis at Philae¹⁶ continued to be used until 551 AD to satisfy the religious needs of Nubian desert tribes such as the Nobades and the Blemmyes.

The cultural attribution for the remains of Cemetery 2 to this transitional period is not only based on the graves' structures, deposits and funerary customs. Clearing the surface around the modern village at the northwest corner of Cemetery 3 (Figure 3), a number of graves resembling those of Cemetery 2 were found,¹⁷ with skeletons placed in an extended position, sometimes wrapped in a shroud and buried with beads similar to those discovered in Cemetery 2. Their presence suggests a link between the late part of the pagan Cemetery 3, containing in particular the tombs of some of the priests of the Philae temple, and the development of another burial ground soon to become the Christian Cemetery 2.

RESEARCH USING THE AMNH EL-HESA COLLECTION

Once the el-Hesa portion of the von Luschan Collection was housed at the AMNH, it became available for study. Two recent studies stand out that have used a significant part of the el-Hesa collection, using a historical frame for their comparative analysis.

Their introductions illustrate the many problems of historical interpretation that have entered the physical anthropological literature in the absence of a recent publication addressing the chronology within which the von Luschan collection should be understood.

Rothschild *et al.*¹⁸ examined 115 individuals from the el-Hesa portion of the von Luschan Collection at the AMNH, to show that Nubians were afflicted during late Antiquity with a form of spondyloarthropathy, instead of what was thought to be rheumatoid arthritis. Unfortunately, while the authors explain how both diseases have so far been confused in diagnostics and literature, they do not see the confusion regarding the historical background of the collection. They report that they studied 138 “Meriotic [sic] Nubian” coming from Semna South in Nubia, “dated 2000 – 1600 BP”, which we should in fact understand as being Meroitic people from Middle Nubia (350 BC – 350 AD). Other human remains from the Nile valley, and used for comparison, were taken from the el-Hesa collection at the AMNH, and from a site identified as “near Pyramids of Light”, as well as from a place registered as “Nubian Egypt”, without any dating. On the map provided with the article, the letter “A” placed near Cairo refers to “Egyptian sites”, while the letter “B” placed at the border between Egypt and Sudan refers to “Meriotic [sic] sites”. Without discussing the core part of their study, there are a number of problematic uncertainties: Is Cairo the location of the “Pyramids of Light”? Which period is meant? Is “B” referring to Nubians in general, while Semna South is known to belong to the Kingdom of Meroe? Or is “B” referring to Nubians even though el-Hesa was mostly an early burial ground for Egyptian Christians from a later date? In their Table 1, Semna South is replaced by the word “Meriotic [sic]”, while farther in the text “Meriotic [sic]” has become a site and not a cultural group or a time period. This confusion continues and makes the point about the diagnosis of spondyloarthropathy weak due to the inaccurate historical and geographical information about the collections used.

A second study, conducted by Irish,¹⁹ also used the AMNH collection. Seventy-two cranial remains from el-Hesa were examined for dental traits. The results were compared to samples from 14 other locations in Egypt. The study covers different periods from Neolithic to Roman times, and includes a Table with historical and geographical information about the samples used. Here, the von Luschan collection is said to be from the Roman period, between “200 – 400 AD”, taken from a “cemetery on the now-submerged Nile island of el Hesa”. Unfortunately, only a few individuals from Cemetery 2 belonged to the fourth century, as the majority is certainly from a later date and should be referred to as from the Christian period.

DISCUSSION

The purpose of this article is twofold. Firstly we wish to highlight the el-Hesa human skeletal collection at the AMNH and provide some useful background information concerning its size,

composition, provenience and lastly, perhaps most importantly, its age.

Second, we wish to illustrate that there is a need for updated published information concerning Nubian osteological collections in general, and the AMNH collection from el-Hesa Cemetery 2 in particular. No reproach could be made to researchers using what is currently available about a collection, i.e., weak or out-of-date documentation, though there is a notable absence of collaboration with a historian or archaeologist of the region—a Nubiologist. This type of expert is equally absent in the review process of their publications, while history of Late Antiquity in Lower and Middle Nubia is particularly complex because of the instability and fluctuation of the border between Roman Egypt and the Kingdom of Meroe, at a time when desert tribes also try to settle in the valley.

Physical anthropology studies include an increasing number of samples from the Nubian area of which the el-Hesa collection is only one instance. Such collections represent an attractive example of a small territory where different traditions and populations come together, but not of a place where a characteristic sample of Meroitic populations should be sought. Physical anthropological research using the el-Hesa and similar collections needs to be better informed, ideally with the kind of information provided above. This will not only help with the interpretation of their data but will also allow their research to assist with the questions raised by historians and archaeologists currently involved in the area.

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NOTES

- 1 Joel D. Irish, “Population Continuity vs. Discontinuity Revisited: Dental Affinities Among Late Paleolithic Through Christian-Era Nubians,” *American Journal of Physical Anthropology* 128 (2005), 520–535; Kanya Godde, “An Examination of Nubian and Egyptian Biological Distances. Support for Biological Diffusion or *In Situ* Development?,” *HOMO, Journal of Comparative Human Biology* 60 (2009), 389–404; Kanya Godde, “Who were the Meroities? A Biological Investigation into the Nubian Post-hiatus Group,” *International Journal of Osteoarchaeology* 20 (2010), 388–395.
- 2 Michele R. Buzon, “Health of the non-elites at Tombo: nutritional and disease stress in New Kingdom Nubia,” *American Journal of Physical Anthropology* 130/1

- (2006), 26–37; Michele R. Buzon and Rebecca Richman, “Traumatic injuries and imperialism: the effects of Egyptian colonial strategies at Tombos in Upper Nubia,” *American Journal of Physical Anthropology* 133/2 (2007), 783–791; Michele R. Buzon and Margaret A. Judd, “Investigating health at Kerma: sacrificial versus nonsacrificial individuals,” *American Journal of Physical Anthropology* 136/1 (2008), 93–99.
- ³ Deano D. Stynder, José Braga and Eric Crubézy, “Cranio-metric evidence for biological continuity between Meroitic and Post-Meroitic populations buried at the necropolis of Missiminia, Middle Nubia,” *South African Archaeological Bulletin* 64 (2009), 122–129.
- ⁴ Valerie B. DeLeon, “Fluctuating asymmetry and stress in a medieval Nubian population,” *American Journal of Physical Anthropology* 132/4 (2007), 520–534.
- ⁵ Clark Wissler, “Felix von Luschan and his collections,” *Natural History* 26/6 (1926), 650–651.
- ⁶ Rudolf Goldbarth, “Untersuchungen an 94 ägyptischen Mumien aus El Hesa,” *Zeitschrift für Morphologie und Anthropologie* 17 (1914), 551–584.
- ⁷ Grafton E. Smith and Frederic Wood Jones, *The Archaeological Survey of Nubia: Report for 1907–1908. Volume II: Report on the Human Remains* (Cairo: National Printing Department, 1910).
- ⁸ George A. Reisner, *The Archaeological Survey of Nubia: Report for 1907–1908. Volume I: Archaeological Report* (Cairo: National Printing Department, 1910).
- ⁹ Derek A. Welsby, and Julie R. Anderson, *Sudan Ancient treasures* (London: The British Museum Press, 2004).
- ¹⁰ Some discoveries clearly refer to that period, such as a cross carved on a slab in the collective grave n° 1,348, a bronze cross tied with a string on one arm of the deceased in the grave n° 1,535, and a mud seal bearing the representation of a cross in grave n° 1,466.
- ¹¹ Reisner 1910, pl. 72h.
- ¹² Reisner 1910, pl. 72j.
- ¹³ Isabelle Bardiès-Fronty and Anne E. Dunn-Vaturi (eds), *Art du jeu, jeu dans l'art : de Babylone à l'Occident Médiéval* (Paris: Réunion des Musées Nationaux, 2012).
- ¹⁴ Paul Perdrizet, “Le jeu alexandrin de l’icosaèdre,” *Bulletin de l’Institut Français d’Archéologie Orientale* 30 (1931), 1–16.
- ¹⁵ George F. Dales, “Of dice and men,” *Journal of the American Oriental Society* 88/1 (1968), 14–23; Irving L. Finkel, “Tossing and turning,” in C. MacKenzie and I. L. Finkel (eds.), *Asian games: the art of contest* (New York: The Asia Society, 2004), 38–45.
- ¹⁶ Jitse H. F. Dijkstra, *Philae and the end of ancient Egyptian religion: a regional study of religious transformation (298-642 CE)* (Leuven: Peeters, 2008).
- ¹⁷ Reisner 1910, 74.
- ¹⁸ Bruce M. Rothschild, Bernardo Arriaza, R. J. Woods and Olivier Dutour, “Spondyloarthropathy Identified as the Etiology of Nubian Erosive Arthritis,” *American Journal of Physical Anthropology* 109 (1999), 259–267.
- ¹⁹ Joel D. Irish, “Who Were the Ancient Egyptians? Dental Affinities Among Neolithic Through Postdynastic Peoples,” *American Journal of Physical Anthropology* 129 (2006), 529–543.