
ESTUDIOS / STUDIES

Craftsmen from the Residence: the case of tomb QH36 (Qubbet el-Hawa, Egypt)

Los artesanos de la residencia: el caso de la tumba QH36 (Qubbet el-Hawa, Egipto)

Cristina Lechuga Ibáñez

Grupo de Investigación HUM458 Egiptología y papirología de la Universidad de Jaén
cli00001@red.ujaen.es / ORCID iD: <http://orcid.org/0000-0003-0112-5596>

ABSTRACT

QH36 is a tomb located in Qubbet el-Hawa necropolis (Aswan, Egypt). The tomb belonged to Sarenputi I, governor of Elephantine during the reign of Senusret I. This hypogeum, systematically excavated by the Qubbet el-Hawa Project (University of Jaén) since 2017, was built by royal craftsmen, according to epigraphic sources. This is corroborated by the tomb's architectural features. But new archaeological evidence supporting this claim emerged in 2022, when excavations in the secondary burial chamber of the main shaft uncovered an unusual stone slab pavement with black ink signs. They are identical to those documented in the mastaba of Imhotep at el-Lisht. This article analyzes the assemblage system used by the work gangs of the royal court at these two different locations, which also archaeologically reinforces the epigraphic sources on royal craftsmen from the north during the construction of QH36. Besides, it shows the possible constructive strategies developed.

Keywords: Egypt; tomb; Middle Kingdom; pavement; assemblage system.

RESUMEN

QH36 es una tumba situada en la necrópolis de Qubbet el-Hawa (Asuán, Egipto). Esta tumba perteneció a Sarenputi I, gobernador de Elefantina durante el reinado de Senusret I. Este hipogeo, excavado sistemáticamente por el Proyecto Qubbet el-Hawa (Universidad de Jaén) desde 2017, fue construido por artesanos reales, según las fuentes epigráficas. Así lo corroboran las características arquitectónicas de la tumba. Sin embargo, una nueva evidencia arqueológica que apoya esta afirmación surgió en 2022, cuando las excavaciones en la cámara funeraria secundaria del pozo principal descubrieron un inusual pavimento de losas de piedra con signos pintados. Estas marcas son idénticas a las documentadas en la mastaba de Imhotep en el-Lisht. Por tanto, este artículo analiza el sistema de ensamblaje utilizado por las cuadrillas de trabajo de la corte real en ambos lugares, y refuerza arqueológicamente las fuentes epigráficas sobre los artesanos reales provenientes del norte para la construcción de QH36. Además, muestra las posibles estrategias constructivas desarrolladas.

Palabras clave: Egipto; tumba; Reino Medio; pavimento; sistema de ensamblaje.

Recibido: 04-02-2025. Aceptado: 24-03-2025. Publicado: 14-08-2025.

Citation / Cómo citar este artículo

Lechuga Ibáñez, C. 2025: "Craftsmen from the Residence: the case of tomb QH36 (Qubbet el-Hawa, Egypt)", *Arqueología de la Arquitectura*, 22: 434. <https://doi.org/10.3989/arq.arqt.2025.434>.

INTRODUCTION

QH36 is a monumental rock-cut tomb located on the northern side of Qubbet el-Hawa necropolis (Aswan, Egypt) (Fig. 1). This tomb belonged to Governor Sarenputi I, who administered the Ta-Seti nome during the reign of Senusret I (the early 12th Dynasty, 1920–1875 BCE¹) (Budge and Wallis 1887: 30-33; Habachi 1985: 24).

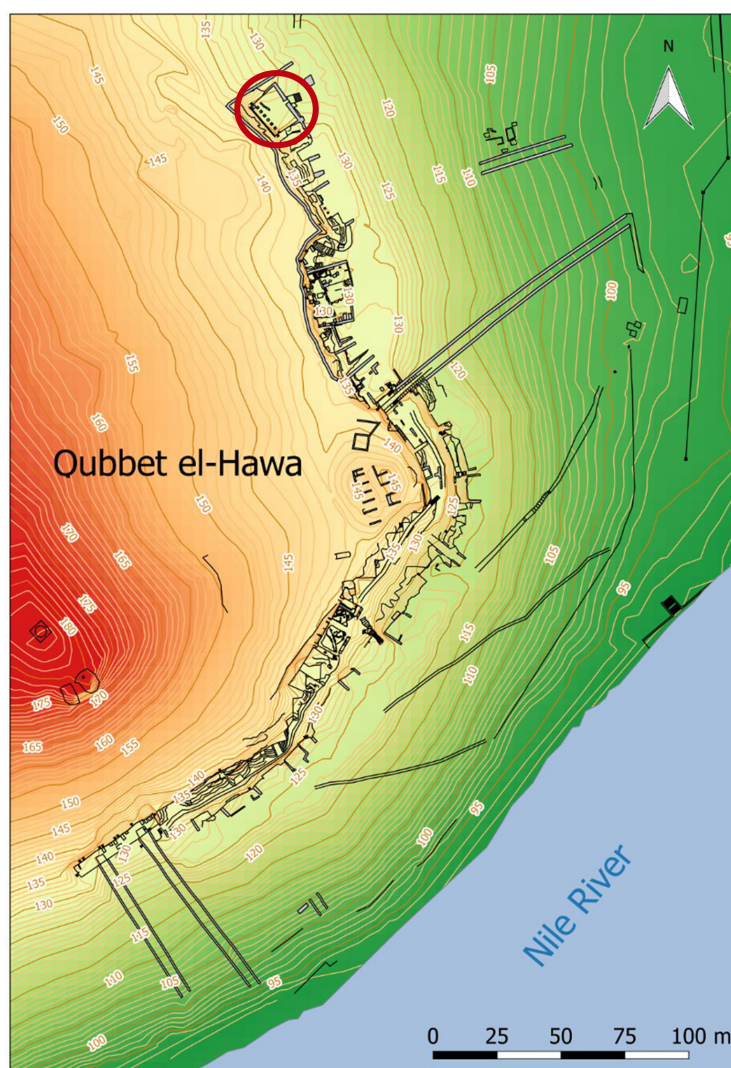


Figura 1. Necropolis of Qubbet el-Hawa. Red circle: QH36. Image of Dr. Antonio Mozas Calvache and Dr. José Luis Pérez García. University of Jaén. ©Proyecto Qubbet el Hawa.

The tomb is divided into two distinct areas: the public zone (superstructure) and the private zone (substructure) (Kanawati 2001: 61; Dodson and Ikram 2008: 82, 198). The public zone consists of an exterior courtyard enclosed by a wall, accessed by stairways which lead up from the lower part of the necropolis hill. This outer space features a façade with a portico supported by six pillars. Small niches for offerings are located on either side of the courtyard. Inside the tomb, a reception area comprises a pillared hall and a cult chapel with two pillars. These inner spaces are connected by a vaulted corridor (Fig. 2) (Müller 1940: 15-23; García González 2011: 69-184; Martínez Hermoso 2018: 2, 9; 2021: 152).

The private area of QH36 consists of various funerary shafts, each leading to one or more burial chambers. In total, QH36 contains nine shafts, eight inside the tomb and one in the courtyard. Between 2017 and 2024, the Qubbet el-Hawa Project (University of Jaén) excavated seven of these shafts and eight burial chambers (Fig. 2) (Jiménez Serrano *et al.* 2017; 2018; García González *et al.* 2022).

¹ The chronology used in the present paper follows Hornung *et al.* (2006). Additionally, for more information about the new reading of Sarenputi I, see García González 2022: 106.

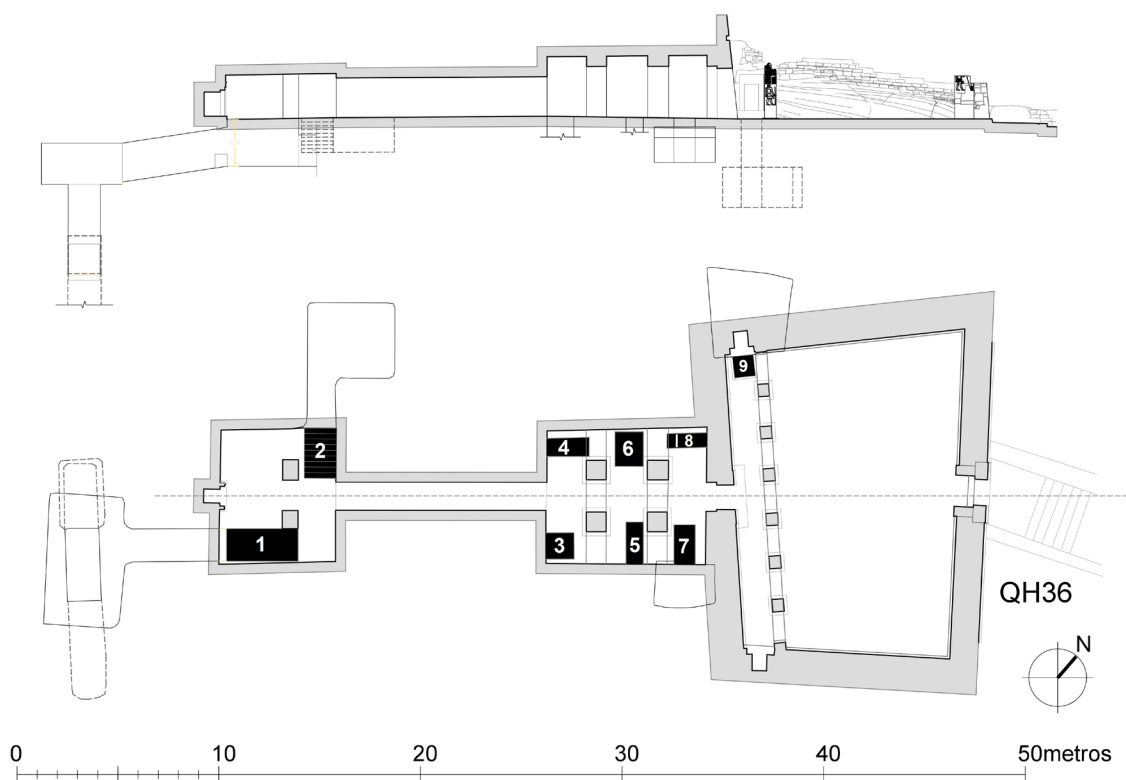


Figura 2. Plan and section of QH36 and its shafts. Main shaft number 1. Image of Dr. Juan Antonio Martínez Hermoso. ©University of Jaén. Proyecto Qubbet el Hawa.

QH36's decoration enhances the monumental architecture of the funerary complex. Currently, it is preserved in the courtyard on various walls and architectural elements, including the façade, pillars, architrave, and lateral offering niches. Decoration is also found inside the tomb, specifically in the pillared hall, corridor, and main cult niche. This decoration is both figurative and epigraphic, using two different techniques: hollow relief in the courtyard and inside the cult niche; and painting inside the tomb (Fig. 3a-b). The figurative decoration depicts scenes of Sarenputi I and his family, as well as scenes of daily life; whereas the epigraphic decoration consists of hieroglyphic inscriptions containing magical and religious formulas, kinship information, and biographical texts concerning Sarenputi I (Müller 1940: 23-51; Favry 2003; García González 2011: 69-185).



Figura 3a-b. A) Reliefs on the façade of QH36. Image of Mr. Raul Fernández Ruiz. ©University of Jaén. Proyecto Qubbet el Hawa. B) Painted decoration in the pillar hall of QH36. Image of Dr. Ricardo Marín Viadel. ©University of Jaén. Proyecto Qubbet el Hawa.

EPIGRAPHIC SOURCES - DISCUSSION

Epigraphic sources are highly valuable to humanistic disciplines such as Egyptology. They provide researchers with significant information about administration, justice, economy, everyday life, and personalities (Hornung 2000: 128; Landgráfová 2011: XII). However, these sources must be considered with caution, and ideally, verified archaeologically beforehand, as their transmission inherently involves interpretation by who narrates or exposes facts (Franke 1994: 29; Hornung 2000: 128).

In Egypt, high officials commonly commissioned autobiographies. These texts were displayed on the walls of the public areas of their tombs, as well as on artefacts such as stelae, or in commemorative/cultic locations (Landgráfová 2011: XVII) with the goal of disseminating their image, most outstanding virtues, values, ethics, and achievements among visitors, primarily those associated with service to the king (Franke 1994: 29; Collier and Manley 2001: 97; García Gonzalez 2011: 185; Landgráfová 2011: XII; Stauder-Porchet *et al.* 2020: 1).

However, as mentioned above, we must be cautious with the information implied in biographical texts, as they often have a strong fictional and metaphorical component. Furthermore, these texts represent the “official” discourse with a standardization from the Old Kingdom (Kloth 2002; Landgráfová 2011: XVI-XVII). Consequently, we should be aware of the potential use of ideology to mask reality, given that the aim of these texts was to preserve a positive image of the deceased in the collective memory (Franke 1994: 29; Morenz 2003: 180-181, 187-189).

BIOGRAPHY OF SARENPUTI I

Regarding the topic of this paper, Sarenputi I's autobiography, displayed on the façade of his tomb (Fig. 4) and replicated within it with some modifications (Favry 2003; García González 2011: 149) is considered a relevant historical source for the early 12th Dynasty, along with other textual sources on this governor found on Elephantine Island (Obsomer 1995: 63-67, 84-86). In both his tomb and his stela at Elephantine, Sarenputi I mentions several favors granted to him by King Senusret I in gratitude for his loyalty and good service. Among these, he highlights the assignment of craftsmen from the Residence (royal court) to work on the construction of his tomb (Gardiner 1908: 125; Müller 1940: 30; Franke 1995: 741-742; Redford 2005: 33; Grajetzki 2006: 84; Parkinson 2009: 23; García González 2022: 49, 53, 130-132, 390).

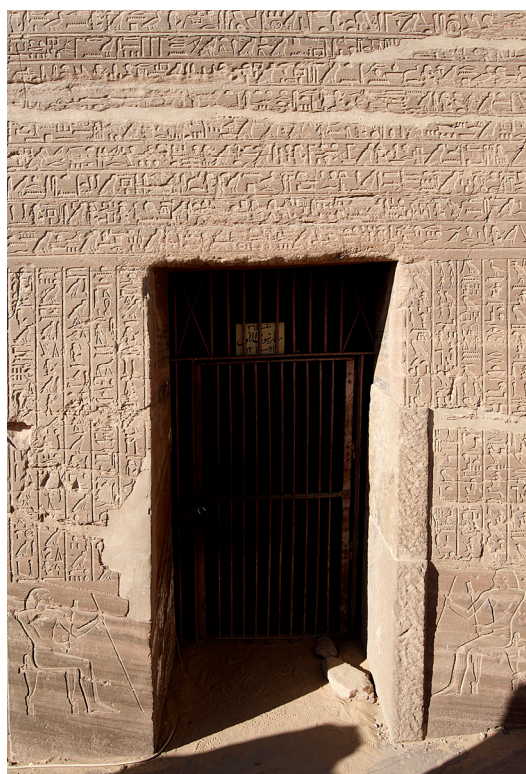


Figura 4. Biography of Sarenputi I on the façade of QH36. Image of the author. ©University of Jaén. Proyecto Qubbet el Hawa.

The participation of royal craftsmen in the construction of his rock-cut tomb is accepted by Egyptologists as a claim. This is because other epigraphic and archaeological evidence demonstrates the involvement of kings and their craftsmen in various constructions and projects throughout Egypt (Franke 1994: 21; 1995: 745; Parkinson 2009: 23; Roth 1991: 2-4, 121; Siegel 2020: 269-273). Furthermore, the organization of royal work gangs is well documented both epigraphically and archaeologically (Roth 1991; Grajetzki 2013: 252).

ROYAL CRAFTSMEN IN THE CONSTRUCTION OF QH36

To understand this, it is important to consider the renewal of the political system that marked the beginning of the Middle Kingdom (11th and 12th Dynasties, 1800-1760 BCE), which also influenced material culture and artistic and constructive canons. During the reigns of Amenemhat I and Senusret I, the workshops of the capital, Itj-tawy,² gained significant importance. They became part of the court's propaganda structure, serving as elements of political, territorial, and social cohesion. The large number of donations, constructions of all kinds, and epigraphic evidence in the provinces attest to the functioning of these workshops as well as their workers and work gangs (Franke 1995: 741; Oppenheim 2015: 25; García González 2022: 49).

Having said that, the architectural typology of tomb QH36 shows a stylistic influence of high officials' tombs from the Theban region during the 11th Dynasty (Fig. 5) (Martín García de la Cruz 2020: 50-54; García González 2022: 80-81). Additionally, the reliefs and painted decoration show the style developed in Thebes.³ Thus, all features present in QH36 indicate the participation of craftsmen from the Residence in the construction work, who were artistically and architecturally trained according to the canons of the court (Franke 1994: 21-22; Hölzl 2005: 1011; García González 2011: 71; Martínez Hermoso 2021: 3010-311; García González 2022: 80-81).

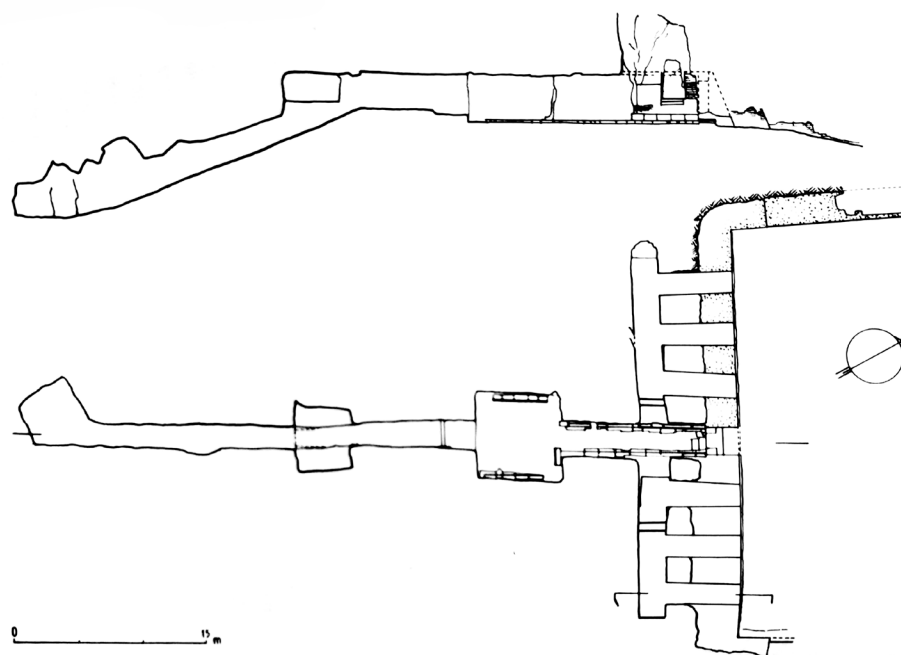


Figura 5. Tomb of Dagi (TT103), end of 11th Dynasty, Deir el-Bahari (Thebes). Image of the author based on Badawy 1966: 180, fig. 64.

Similarly, some materials used in the construction of QH36 suggest royal involvement. By way of illustration, the limestone used in jambs of the courtyard door (Fig. 6). Geologically, the main deposits of this type of rock are located between the north of Cairo and south of Esna areas (Harrell and Storemyr 2009: 17; Bloxam 2010: 2). Therefore, the limestone present in Sarenputi I's tomb was brought from one of these places on behalf of the king. This is because the organization of works and craftsmen, as well as expeditions to quarries, was under royal decree (Ezzamel 2004: 507, 523-525; Grajetzki 2013: 216-217; Oppenheim 2015: 26).

² Thebes was the capital during the 11th Dynasty, but Amenemhat I, first king of the 12th Dynasty, transferred the capital to Itj-tawy in the north.

³ See footnote 2.



Figura 6. Limestone jambs of the courtyard entrance, QH36. Image of the author. ©University of Jaén. Proyecto Qubbet el Hawa.

NEW ARCHAEOLOGICAL EVIDENCE: A MARKED STONE PAVEMENT IN QH36

In 2022, excavations in the southern burial chamber (Sector 1d), a secondary chamber located within the main shaft, uncovered a notable pavement of irregular stone slabs joined with plaster and rubble, exhibiting high quality craftsmanship (Fig. 7).⁴ This pavement rested on a layer of sand, which acted as a “pillow” to help the slabs settle, a system still used in paving today (Pérez Machado *et al.* 2022: 6). Beneath the sand there was a fractured bedrock, which might have been the reason for constructing the pavement (Fig. 8).



Figura 7. Stone pavement of the burial chamber (Sector 1d). Image of Ms. Patricia Mora Riudavets. ©University of Jaén. Proyecto Qubbet el Hawa.

⁴ At the moment, it is the second pavement of this type documented in Qubbet el-Hawa necropolis. However, this one from QH36 presents the highest quality and a specific dating. A forthcoming paper about different pavements recorded by Qubbet el-Hawa project will discuss the one from QH36 in further detail.

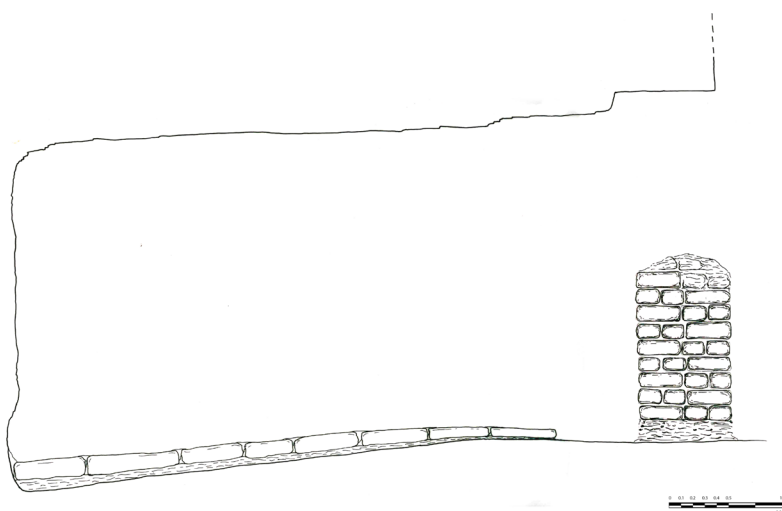


Figura 8. Section of the secondary burial chamber (Sector 1d) with stone slab pavement. Drawing by Ms. Ana Belén Jiménez Iglesias. ©University of Jaén. Proyecto Qubbet el Hawa.

After an *in situ* analysis of the pavement, several black ink signs were documented on different slabs. These signs varied, with one exception: a sign was repeated on several slabs (Fig. 9). Some signs were poorly preserved, requiring specialized software to enhance them and identify any additional, less visible signs (Fig. 10).

QH36/22/1d/SU75

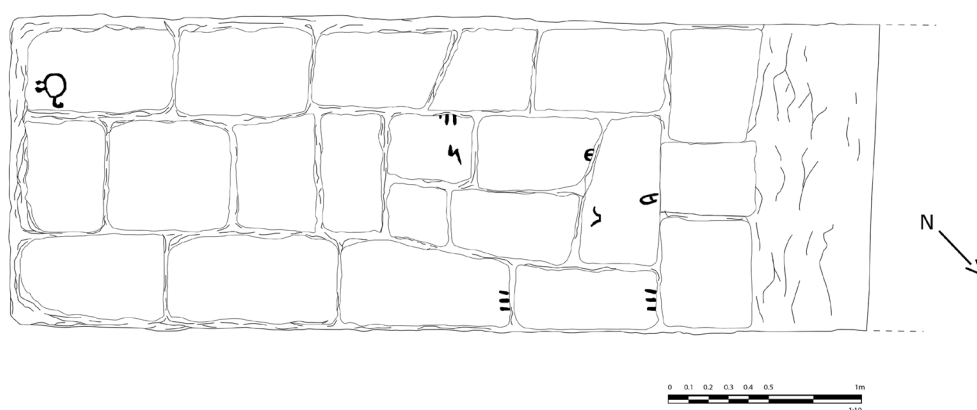


Figura 9. Pavement of the burial chamber (Sector 1d) and sign on the slabs. Drawing by Dr. Vicente Barba Colmenero; digitalization and digital reconstruction of the sign on the pavement by the author. ©University of Jaén. Proyecto Qubbet el Hawa.

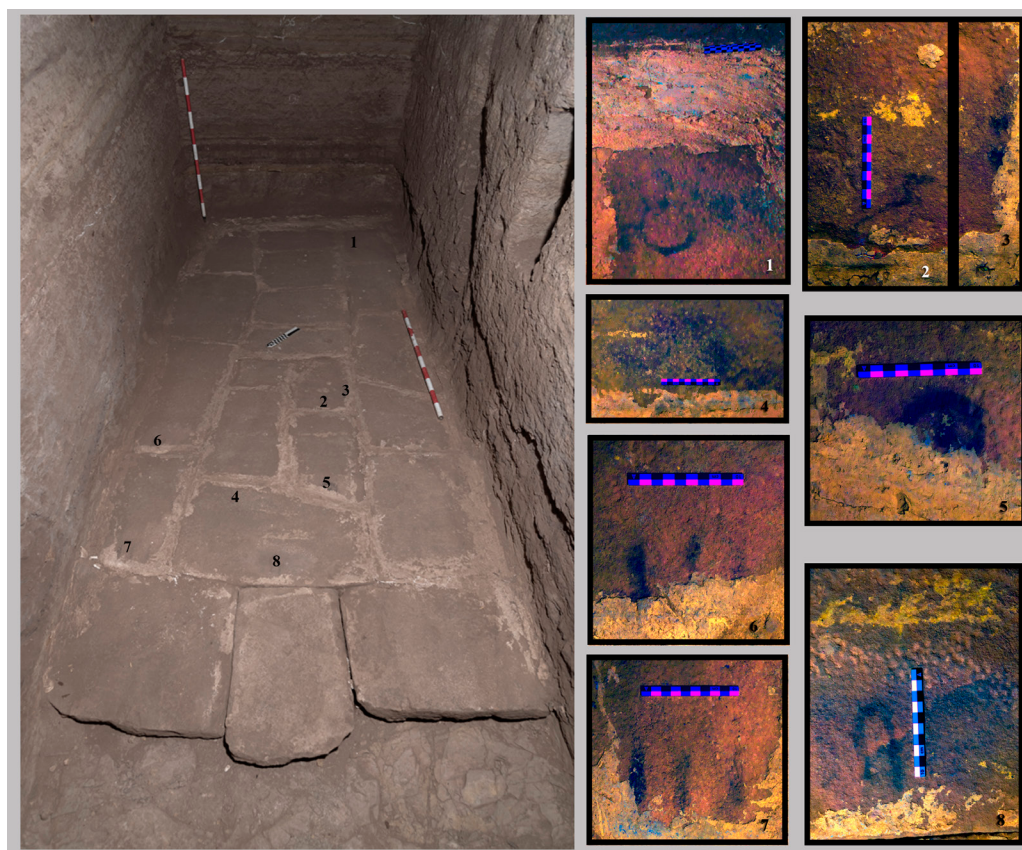


Figura 10. Left: Location of the signs. Right: underlined signs with Dstretch. Image of the author based on photos of Ms. Patricia Mora Riudavets. ©University of Jaén. Proyecto Qubbet el Hawa.

To understand the signs found on QH36 pavement, we must examine work marks documented in various stone buildings at different archaeological sites. This allows us to identify different types of marks, such as control notes, team or assemblage marks (indicating dimension or position) (Arnold 1990: 19-38; Ziegler 2007: 141), which date back from the Old Kingdom (Dobrev 1996; Ziegler 2007: 136-142). Among these signs, it is possible to identify geometric, figurative, or numerical hieroglyphs, often in their hieratic form (Arnold 1990: 19-38; Ziegler 2007: 141).

In the case of QH36, all types of signs mentioned above are present. However, not all of the slabs are marked with signs, a point that will be discussed below.

SETTING MARKS

Researchers have noted that isolated geometric and figurative signs usually correspond to team or setting marks. Regarding setting marks, their presence is not consistent within a single architectural space. Rather, blocks were typically marked where confusion was possible during placement, particularly with blocks of similar dimensions or when precise positioning was required (Arnold 1990; Ziegler 2007: 142). In the case of QH36, the signs on the slabs were likely to serve this purpose.⁵ This is suggested by the notable concentration of signs on the most irregular slabs of the pavement, where positioning would have been more challenging (Fig. 9).

According to Ziegler (2007: 142), numerical signs can be oriented either horizontally or vertically. Vertically oriented signs appear to be used for counting blocks or noting the order/date of block delivery, often linked to a specific work team. Horizontally oriented signs, on the one hand, might have indicated the number of blocks present in a wall area/line (Arnold 1990: 34; Ziegler 2007: 142). On the other hand, they could have referred to the order of block lines from the base of the wall (or another reference point). An example of this latter interpretation is tomb 306⁶ at El Riqqa

⁵ However, we cannot rule out the possibility that some signs might be missing due to preservation issues, anthropic activity and/or post-depositional processes identified during the archaeological excavation.

⁶ Researchers note that the construction of this tomb's substructure is identical to that of contemporary pyramid burial chambers (Badawy 1966: 179). This supports the idea that artisans and/or workers from the royal court worked on the tombs of high officials, as it is known from epigraphic sources.

(north of Meydum), dated from the 12th Dynasty. The substructure of this tomb features numbered limestone lining. Researchers have interpreted this numbering as evidence of blocks being dressed and assembled outside the tomb before being moved inside for their final placement in the substructure (Fig. 11) (Badawy 1966: 179).

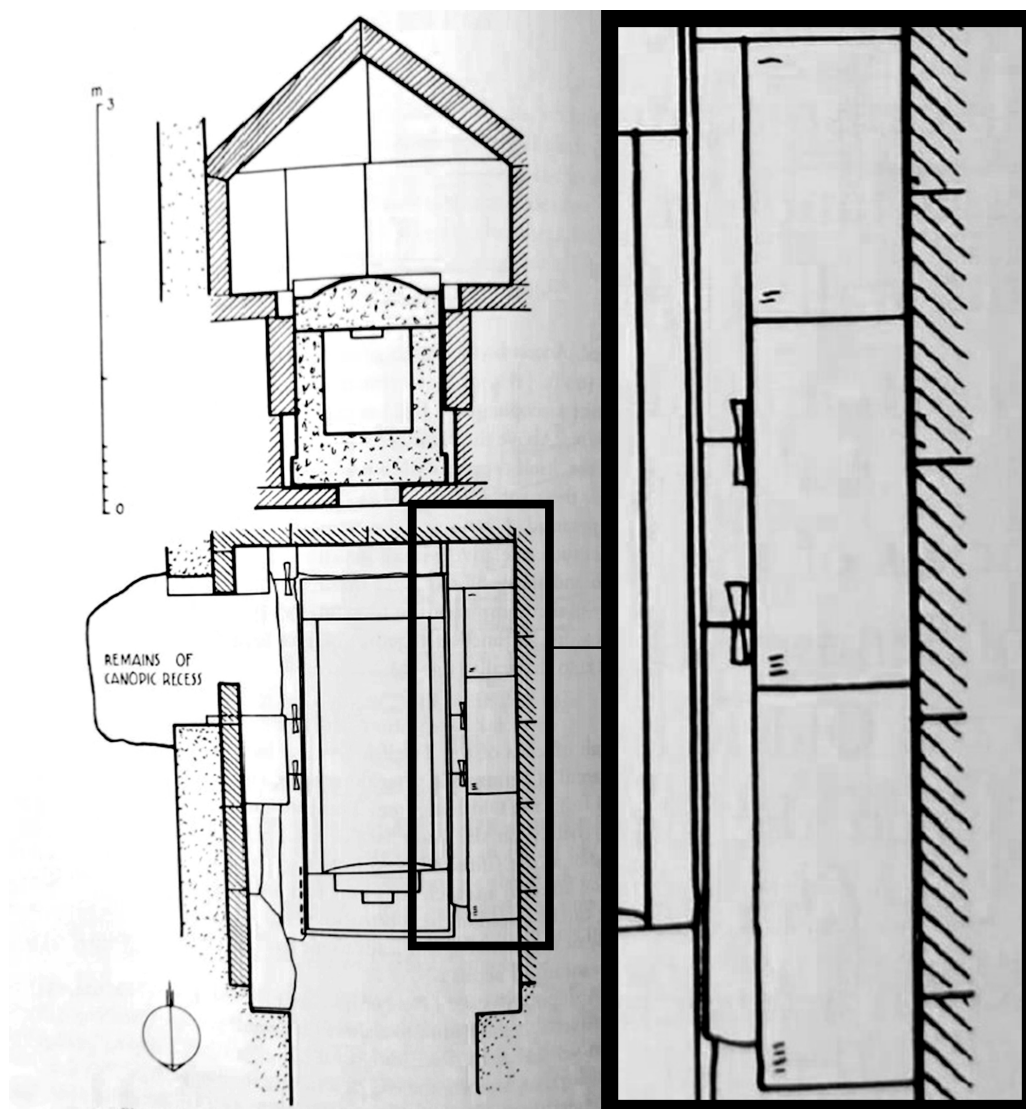


Figura 11. Tomb 306 from El Riqqa (north of Meydum) and detail of assemblage system. Image of the author based on Badawy 1966: 180, fig. 79.

However, these proposals primarily address wall arrangements, whereas QH36 features a pavement. Considering the aforementioned proposals and our observations, we suggest that the southern slab line of our pavement served as the baseline for the setting system, guiding the slab assembly. The regular shape and consistent setting of these slabs, which presented minimal positional ambiguity, support this interpretation. Additionally, an isolated sign on the corner slabs could indicate the starting slab and its position within the chamber.

ROYAL CRAFTSMEN AND SETTING MARKS IN EL-LISHT

According to Felix Arnold's study (1990: 34) in El-Lisht cemetery,⁷ painted setting signs seem to have been chosen randomly. There is a similar observation at QH36, where a set of hieratic signs appears to lack any discernible translation and meaning related to the stone, construction, or assemblage works (Fig. 12). Thus, these signs were

⁷ El-Lisht would be located near the ancient 12th Dynasty capital of Itj-tawy, and locates the cemeteries of kings and high officials. See footnote 2.

simply likely to serve as random guides, possibly considering the reading orientation⁸ of the figurative signs, the indications of the numerical signs, and/or the arrangement of the assemblage.

Among the setting marks studied by Arnold, he highlights the system used in the secondary burial chamber of shaft 5124 from the mastaba of Imhotep, a high official who served during the reign of Senusret I and whose funerary complex was located near the king's pyramid complex (Arnold 2008: 33-34). As for the setting system in Imhotep's mastaba, Felix Arnold (1990: 36) suggests that the ingenious system indicates the presence of an experienced architect during construction. These signs are found in two burial chambers, corresponding to the main shaft (5117) and a secondary shaft (5124) (Fig. 12).

A comparative analysis of these marks with those at QH36 reveals that the same hieratic signs are used in both tombs, specifically in QH36 and the secondary shaft 5124, with some variations, likely due to the personal handwriting of the craftsmen⁹ (Fig. 12) (Möller 1909; Arnold 1990: 39; Möschen 2021: 1). This suggests that the same gang, or part of its workers, could have been involved in the construction of both tombs.

Gardiner (1996)	Möller (1909)	QH36	Imhotep's shaft 5124
 G17	 196		
 R4	 552		
 V6	 520		
Currently Unidentified	Currently Unidentified		
 Z1 (Number sign, 3)	 615	 x3	
 U6	 465	 A	
 S29	 432		
 T9	 436		
 T12	 438		
 Y5	 537		
 N41	 98		
 N23	 324		
 Z1 (number sign, 2)	 657		
 Z4	 560		

Figura 12. Correspondence proposal between the documented hieratic and hieroglyphic signs (Möller 1909; Gardiner 1996) with those found in QH36 and Imhotep's shaft 5124.

The construction of QH36 and Imhotep's mastaba also presents a close, temporal relationship. Based on architectural and archaeological studies, the construction of Imhotep's tomb is dated from the second half/late Senusret I's reign (Arnold 2008: 34). Whereas the construction of QH36 is estimated to have occurred between the 18th and 32nd year of Senusret I's reign¹⁰ (García González 2022: 196). This close dating reinforces the idea of a shared workforce between the two projects.

⁸ Egyptian texts could be written and read horizontally or vertically, and from left to right or vice versa (Möller 1909: 7).

⁹ The limited corpus of known hieratic signs makes it difficult to account for all possible handwriting variations of a single sign (Möller 1909; Arnold 1990: 39; Möschen 2021: 1).

¹⁰ Senusret I reigned for approximately 45/46 years, taking into account possible co-regency periods with his predecessor and successor, a proposal favored by some researchers (Obsomer 1995; Hornung, Kraus and Warburton 2006: 481).

SETTING SYSTEM IN QH36 AND IMHOTEP'S SHAFT 5124

While the setting systems in QH36 and Imhotep's mastaba differ, both show slabs and blocks which were very likely marked outside the tombs, and then, moved inside the chambers. The differences in the setting process probably reflect the nature of the work, spaces, conditions, and architectural typology and elements. On the one hand, in Imhotep's shaft, neighboring blocks were marked with the same sign on each of their contiguous sides (Fig. 13) (Arnold 1990: 34).

On the other hand, and regarding the setting system of QH36, many signs were located on the edges of the slabs, possibly so that the sign would span two slabs. This would simplify the setting process within the tomb by allowing the slabs to be easily positioned by matching the two parts of the sign. However, this cannot be confirmed, as the slabs are joined with a wide line of plaster, which would cover part of the sign, potentially leading to its loss. The other signs could indicate the position of the adjacent slab, and perhaps, identical signs on contiguous slabs have been lost; similar to what was found in Imhotep's shaft. Alternatively, a single sign may have been sufficient to position the piece correctly, given the distribution and types of signs.

Despite the different setting processes, it is noteworthy that the signs in both constructions are located in the same area of the monuments: a secondary chamber. Furthermore, they appear on the same number of blocks/slabs row. Additionally, in both constructions, some signs are located on the central row/block/slab while others are on the outer ones, exhibiting a pattern or correlation between the signs and their location during the setting process, which coincides in both tombs. This suggests that the workers employed a specific and regular marking system; that is, a specific sign corresponding to the block's or slab's placement (Fig. 13), or even a monument area, as in this case - two secondary chambers. Therefore, Felix Arnold's proposal about randomly chosen signs is dismissed in terms of constructional reasons as opposed to randomness in linguistic terms, which is certain.

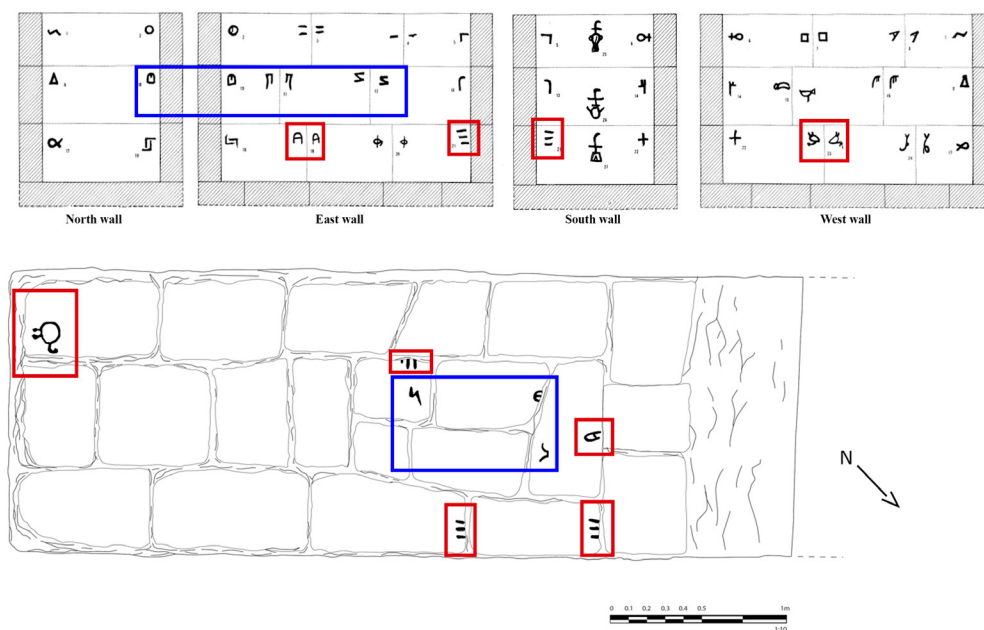


Figura 13. Distribution of the signs on the walls of the Imhotep's shaft 5124 (upper plan) and the slabs of QH36 (lower plan). Image of the author based on Arnold (1990: pl. 14) and field documentation of QH36.

CONCLUSIONS

Despite the ongoing discussion about the veracity and objectivity of epigraphic sources in historical disciplines, it can be confirmed that, in the case of Sarenputi I and QH36, the epigraphic information about the presence of craftsmen from the Residence is demonstrated by the architectural characteristics of the tomb and the stone slab pavement along with its setting marks - presented here due to the following reasons:

Given the documented presence of royal work gangs on numerous construction projects throughout Egypt, it is plausible that the same gang, or some workers of it, worked on both QH36 and Imhotep's mastaba by order of Senusret I. This is suggested by the close dating of the two constructions and the fact that their owners belonged to the social elite. However, the primary evidence supporting this connection lies in the similar setting systems and associated marks found in both tombs.

On the one hand, there are the similar painted hieratic signs documented in both tombs, whose slight differences would be those of calligraphic and literacy reasons. On the other hand, the specific location of the signs in the construction coincides in both cases: a secondary funerary chamber. Besides, these signs follow a specific position within the space, as shown in fig. 13, suggesting a precise arrangement in terms of usage of these marks. This allows us to conclude that these signs were used regularly, similar to control notes for workers and gangs, by a specific group of workers responsible for the setting works.

In light of the above and the present study, Felix Arnold's proposal regarding the random selection of signs in setting systems is reinforced by the signs found in QH36 and Imhotep's mastaba. This is because their translation and meaning do not seem to align with architectural, masonry or setting functions. However, it's important to emphasize that, while they were randomly chosen as for their translation and meaning, their usage is not.

Regarding the setting system, while certain patterns and locations in the use of signs are shared between the two tombs, as explained above, the systems themselves differ. These differences in assemblage processes could be due to constructive needs or variations in the qualifications and experience of the people in charge of the works. However, we must also consider the possible loss of signs in QH36, which prevents us from a complete understanding of the system used there and leaves it subject to the possibility that it was originally similar to that of Imhotep's mastaba.

Despite the above-mentioned matter, we can confirm that QH36's assembly system's painted marks focused on the area that presents the greatest challenge for the setting process, according to the interpretations previously exposed in this paper. This is evidenced by the concentration of signs, primarily located on the most irregularly cut slabs with the most ambiguous positioning. Whereas the isolated sign in the southwest corner likely indicates the starting slab in the assembly process, which proceeded from south to north and east to west.

ACKNOWLEDGEMENTS

The author is grateful to the sponsors, who made these archaeological works possible, and to the members of Qubbet el-Hawa project for their crucial field collaboration, which was instrumental for an accurate graphic documentation in the development of this study. She also thanks the project management for facilitating this work and providing valuable recommendations.

Finally, a special mention to the linguist Ms. Nuria Linares Fernández, who proofread the present paper.

DECLARATION OF COMPETING INTEREST

The author of this article declares that she has no financial, professional or personal conflicts of interest that could have inappropriately influenced this work.

AUTHORSHIP CONTRIBUTION STATEMENT

Cristina Lechuga Ibáñez: conceptualization, formal analysis, investigation, methodology, writing – original draft – review & editing.

BIBLIOGRAPHY

- Arnold, D. 2008: *Middle Kingdom tomb architecture at Lisht*. The Metropolitan Museum of Art, New York.
- Arnold, F. 1990: *The south cemeteries of Lisht, vol. 2. The control notes and team marks*. The Metropolitan Museum of Art, New York.
- Badawy, A. 1966: *A history of ancient Egyptian architecture. The first Intermediate Period, the Middle Kingdom and the Second Intermediate Period*. University of California Press, Berkeley and Los Angeles.
- Bloxam, E. 2010: "Quarrying and Mining (Stone)", in W. Wendrich (ed.), *UCLA Encyclopedia of Egyptology*. UCLA, Los Angeles. <http://digital2.library.ucla.edu/viewItem.do?ark=21198/zz0026jkd5>.
- Budge, E. and Wallis, A. 1887: "Excavations made at Aswân by Major-General Sir F. Grenfell, during the years 1885 and 1886", *Proceedings of the Society of Biblical Archaeology*, 10, pp. 4-40.

- Collier, M. and Manley, B. 2001: *Introducción a los jeroglíficos egipcios*. Alianza Editorial, Madrid.
- Dodson, A. and Ikram, S. 2008: *The tomb in Ancient Egypt. Royal and private sepulchres from the Early Dynastic Period to the Romans*. Thames & Hudson, London.
- Dobrev, V. 1996: “Les marques sur pierres de construction de la nécropole de Pépi Ier. Étude prosopographique”, *Bulletin de l’Institut français d’archéologie orientale*, 96, pp. 103-142.
- Ezzamel, M. 2004: “Work Organization in the Middle Kingdom, Ancient Egypt”, *Organization*, 11 (4), pp. 497-537.
- Favry, N. 2003: “La double version de la biographie de Sarenpout Ier à Qoubbet el-Haoua”, *Bulletin de l’Institut français d’archéologie orientale*, 103, pp. 219-234.
- Franke, D. 1994: *Das Heiligtum des Heqaib auf Elephantine: Geschichte eines Provinzheiligtums im Mittleren Reich*. Heidelberger Orientverl, Heidelberg.
- Franke, D. 1995: “The Middle Kingdom in Egypt”, in J. M. Sasson (ed.), *Civilizations of the Ancient Near East*, Vol. 2, pp. 735-748. Charles Scribner’s Sons, London.
- García, González, L. M. 2011: *Sarenput I. Estudio histórico de un nomarca de Ta-Seti a principios de la dinastía XII*. Trabajo de Investigación, Departamento de Antropología Geografía e Historia, Universidad de Jaén. Unpublished.
- García González, L. M. 2022: *The local Egyptian administration in the early Middle Kingdom: the case study of Sarenputi I and his Family in Elephantine*. PhD thesis, University of Jaén. Unpublished.
- García González, L. M.; Alba Gómez, J. M.; Barba Colmenero, V.; Lechuga Ibáñez, C.; de Cupere, B.; van Neer, W.; Rubio Salvador, Á.; Díaz Blanco, A.; Jiménez Iglesias, A. B.; Yvanez, E.; Lutz, S.; Díaz Hernández, R. and Jiménez Serrano, A. 2022: “Resultados de la campaña de excavación arqueológica del proyecto Qubbet el-Hawa de la Universidad de Jaén en Asuán (Egipto) (2022)”, *Boletín de la Asociación Española de Egiptología*, 31, pp. 69-95.
- Gardiner, A. H. 1908: “Inscriptions from the tomb of Si-renpowet I, prince of Elephantine”, *Zeitschrift für Ägyptische Sprache und Altertumskunde*, 45, pp. 123-140.
- Gardiner, A. H. 1996: *Egyptian Grammar; being an Introduction to the Study of Hieroglyphs*. Third Edition, revised [First edition 1927]. Griffith Institute Publications, Ashmolean Museum, Oxford.
- Grajetzki, W. 2006: *The Middle Kingdom of Ancient Egypt*. Duckworth, London.
- Grajetzki, W. 2013: “Setting a state anew: The central administration from the end of the Old Kingdom to the end of the Middle Kingdom”, In J. C. Moreno García (ed.), *Ancient Egyptian Administration. Series: Handbook of Oriental Studies. Section 1 The Near and Middle East*, vol. 104, pp. 215-258. Brill, Leiden.
- Habachi, L. 1985: *Elephantine IV. The sanctuary of Heqaib*. Verlag Phillip von zabern, Mainz, Rhein.
- Harrell, J. and Storemyr, P. 2009: “Ancient Egyptian quarries - an illustrated overview”, in E. Bloxam, T. Heldal and P. Storemyr (eds.), *QuarryScapes: Ancient Stone Quarry Landscapes in the Eastern Mediterranean*, vol. 12, pp. 7-50. The Geological Survey of Norway, Trondheim.
- Hölzl, C. 2005: “Thebes, el-Tarif, saff-tombs”, in K. A. Bard (ed.), *Encyclopedia of the Archaeology of Ancient Egypt*, pp. 1011-1013. Routledge, Abington – New York.
- Hornung, E. 2000: *Introducción a la Egiptología. Estado, métodos, tareas*. Trotta, Madrid.
- Hornung, E.; Krauss, R. and Warburton, D. A. 2006: *Handbook of Ancient Egyptian Chronology*. Brill, Leiden.
- Jiménez Serrano, A.; Alba Gómez, J. M.; de la Torre Robles, Y.; García González, L. M.; Barba Colmenero, V.; Caño Dorte, A.; Montes Moya, E.; Rodríguez Ariza, O.; Pérez García, J. L.; Mozas Calvache, A.; Martínez Hermoso, J. A. Bardanova, M.; Van Neer, W.; Eschenbrenner, G.; López Grande, M. J.; Botella López, M.; Alemán Aguilera, I.; Rubio Salvador, Á.; Sáez-Pérez, M. P.; López-Obregón Silvestre, T.; Alarcón Robledo, S.; Morales Rondán, A. and Hakim Karrar, Abdel. 2017: “Proyecto Qubbet el-Hawa: trabajos arqueológicos de las tumbas QH32, QH33, QH34aa, QH34bb, QH122, QH35p y QH36. Novena campaña (2017)”, *Boletín de la Asociación Española de Egiptología*, 26, pp. 13-110.
- Jiménez Serrano, A.; Alba Gómez, J. M.; Martínez de Dios, J. L.; de la Torre Robles, Y.; García González, L. M.; Barba Colmenero, V.; Caño Dorte, A.; Espejo, A. M.; Bardanova, M.; López Grande, M. J.; Díaz Blanco, A. and Correias Amador, M. 2018: “Proyecto Qubbet el-Hawa: primeros resultados de los trabajos llevados a cabo en las tumbas QH32, QH33, QH34bb, QH35n, QH35p y QH369”, *Boletín de la Asociación Española de Egiptología*, 27, pp. 13-163.
- Kanawati, N. 2001: *The tomb and beyond. England*. Aris and Phillips Ltd, Warminster.
- Kloth, N. 2002: *Die (auto-) biographischen Inschriften des ägyptischen Alten Reiches: Untersuchungen zu Phraseologie und Entwicklung*. Studien zur altägyptischen Kultur, 8. Buske, Hamburg.
- Landgráfová, R. 2011: *It Is My Good Name That You Should Remember. Egyptian Biographical Texts on Middle Kingdom Stelae*. Charles University in Prague, Prague.
- Martín García de la Cruz, A. 2020: “Estudio diacrónico de la tumba del visir Dagi (TT103)”, *Boletín de la Asociación Española de Egiptología*, 29, pp. 49-76.
- Martínez Hermoso, J. A. 2018: “Reconstrucción virtual del exterior del complejo funerario de Sarenput I (QH36)”, *Arqueología de la Arquitectura*, 15, e071. <https://doi.org/10.3989/arq.arqt.2018.006>.
- Martínez Hermoso, J. A. 2021: *Qubbet el-Hawa en el Reino Medio: Arquitectura y Construcción*. UJA Editorial, Jaén.
- Möller, G. 1909: *Hieratische Paläographie. Die altaegyptische Buchschrift in ihrer Entwicklung von der fünften Dynastie bis zur römischen Zeit*. Band I. J. C. Hinrichs’sche Buchhandlung, Leipzig.
- Morenz, L. D. 2003: “Tomb Inscriptions: the Case of the I versus Autobiography in Ancient Egypt”, *Human Affairs*, 13/2, pp. 179-196. <https://doi.org/10.1515/humaff-2003-130209>.
- Möschén, S. 2021: *Hieratische Chrestomathie. Teil I: Altes und Mittleres Reich*. LIT Verlag, Münster.
- Müller, H. W. 1940: *Die Felsengräber der Fürsten von Elephantine aus der Zeit des Mittleren Reiches*. Verlag J. J. Augustin, Glückstadt.
- Obsomer, C. 1995: *Sésostris Ier: étude chronologique et historique du règne*. Connaissance de l’Égypte ancienne, 5. Éditions Safran, Bruxelles.
- Oppenheim, A. 2015: “Artists and Workshops: The Complexity of Creation”, in A. Oppenheim, D. Arnold, D. Arnold and K. Yamamoto (eds.), *Ancient Egypt Transformed: The Middle Kingdom*, pp. 23-27. Metropolitan Museum of Art, New York.
- Parkinson, R. B. 2009: *Reading ancient Egyptian poetry. Among other histories*. Wiley-Blackwell, Chichester, Malden.
- Pérez Machado, L.; Meireles Tamayo, B.; Fuentes Alpizar, D. C.; Peña Mijenes, C. and Alonso Aenlle, A. 2022: “Empleo de adoquines de concreto en la construcción de pavimentos”, *Revista de Arquitectura e Ingeniería*, 16/ 2. Open access: <https://www.redalyc.org/articulo.oa?id=193971847007>.

- Redford, D. B. (2005): *De esclavo a faraón. Los faraones negros de la XXV Dinastía*. Crítica, Barcelona.
- Roth, A. M. 1991: *Egyptian Phyles in the Old Kingdom: The Evolution of a System of Social Organization*. Oriental Institute of the University of Chicago, Chicago.
- Siegel, O. 2020: *Walls of the rulers: The development of monumental enclosure walls in ancient Egypt prior to the New Kingdom*. PhD thesis. University of Chicago, Illinois.
- Stauder-Porchet, J.; Frood, E. and Stauder, A. (eds.) 2020: *Ancient Egyptian Biographies: Contexts, Forms, Functions*. Lockwood Press, Columbus.
- Ziegler, C. 2007: *Fouilles du Louvre à Saqqara, vol. 1: Le Mastaba d'Akhetetep*. Peeters Publishers, Louvain / Paris.