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Irene Forstner-Müller – Nadine Moeller (eds.)

The Hyksos Ruler Khyan and the
Early Second Intermediate Period in Egypt:
Problems and Priorities of Current Research

Proceedings of the Workshop of the Austrian Archaeological
Institute and the Oriental Institute of the University of
Chicago, Vienna, July 4–5, 2014

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Nadine Moeller – Irene Forstner-Müller

Introduction

The recent discoveries at three important sites in Egypt, in the north at the Hyksos capital Avaris located at Tell el-Dab^a in the Eastern Nile Delta and in the south at Abydos and Tell Edfu, can be considered as new pieces to the puzzle for the reconstruction of political, economic and cultural developments characterizing the Second Intermediate Period (ca. 1750–1550 B.C.). In view of the new data from these sites, of which two concern directly the rule of the Hyksos king Khyan, prompted the opening of a new discussion amongst the leading scholars in this field of research. The aim of this workshop, which took place in Vienna and which had been co-organized by the Austrian Archaeological Institute Cairo Branch and the Oriental Institute, University of Chicago, was to present the archaeological discoveries and then to discuss the implications within a group of specialists in order to re-evaluate the current understanding of the history of the Second Intermediate Period. This concerns in particular the rule of the Hyksos king Khyan, the chronological implications of the clay sealings from Tell Edfu and Tell el-Dab^a in addition to the new evidence for an ›Abydos Dynasty‹ as suggested by the excavations of a so-far unknown cemetery of rulers including the tomb of king Senebkay. The discussions at the meeting turned out to be very constructive even if there are still a variety of opinions especially concerning the chronological implications, which is not surprisingly the most contested point in the current debate. The contributors to this workshop chose topics for the discussions that cover a variety of themes such as the relative and absolute chronology in relation to the known historical chronology, the political events and developments, the typology and use of scarab seals and the ceramic evidence, in addition to the results from the three fieldwork projects mentioned above. This volume therefore brings together a selection of different viewpoints and analyses within the framework of the rule of the Hyksos king Khyan, which have the aim to stimulate further discussion and future research into the many questions that still remain open and unsolved.

The archaeological data relating to the Hyksos king Khyan

The recently discovered archaeological material relating to Khyan was presented in much detail, with a particular emphasis on the precise contexts, the relation to the local occupation phases and strata from Tell el-Dab^a and Tell Edfu, which both yield a complex stratigraphic sequence typical for tell settlements in Egypt. The aim of these presentations was to set the parameters for further discussion among the participants of the workshop.

Numerous clay sealings showing the cartouche of the Hyksos ruler Khyan have been excavated in two areas at Tell el-Dab^a and the details of the archaeological contexts were presented in depth by the field directors, Manfred Bietak and Irene Forstner-Müller. At Tell el-Dab^a one of the two main excavation areas is area F/II where a palatial complex of the Hyksos Period has been excavated and published by Manfred Bietak and Irene Forstner-Müller. Bietak proposes a strong link between the occupation of the palatial complex and the reign of Khyan based on the finds of several sealings with Khyan's cartouche in a number of pits (trash and offering pits) that were found together with large amounts of discarded household refuse especially pottery. In addition, recent work by Irene Forstner-Müller and her team have unearthed a new settlement quarter

in R/III dating to the 15th Dynasty and here also several clay sealings naming Khyan have been discovered among other sealings. The archaeological contexts, which in all of these cases were secondary deposits, provide mainly a *terminus post quem* for the built structures around them and indicate that Khyan must have been reigning earlier. However, it became clear that the first occurrence of broken clay sealings with the cartouche of Khyan can be associated with the early 15th Dynasty but they also appear as residual finds in the later 15th Dynasty (strata D/3 and D/2) at Tell el-Dab^ca. The earliest occurrence is significant and an important chronological anchor point, establishing that Khyan's reign started some time during phase E/1 or possibly even earlier (E/2). The first phase of the palatial complex in area F/II also dates to E/1, and these observations make a good case for E/I being the level largely contemporary to at least part of his reign. Chiara Reali adds a detailed analysis of the typology of the Khyan sealings in general and other sealing motifs that were found in the same contexts in addition to further characteristics and differences of the various Khyan sealings found in area R/III. Both authors highlight the current problems with linking the various occupation phases or strata at Tell el-Dab^ca to the absolute dates and Egyptian chronology.

The evidence from Tell Edfu where the largest group of clay sealings naming Khyan have been discovered was presented and discussed in detail by Nadine Moeller and Gregory Marouard. More than 40 clay sealings has been excavated within a sizeable administrative building complex that is marked by two columned halls, a northern and a southern one. The sealings naming Khyan come from an undisturbed layer that marks the final occupation and subsequent abandonment of the northern columned hall that can be directly linked to the activity of discarding these sealings during the opening of commodities that had arrived there. This relatively recent discovery from Tell Edfu has the advantage to shed new light on a settlement site in Upper Egypt and also allows for a detailed analysis of a sealing corpus that was found in a secure and sealed archaeological context, which indicates that a concentration of administrative tasks were carried out in the northern columned hall of this building complex. It was founded during the late Middle Kingdom, and remained in use until the early Second Intermediate Period based on the analysis of the relevant ceramic material which has been conducted by Natasha Ayers. Her contribution at the workshop was the presentation of the ceramic assemblages recovered from the main phases of use, abandonment and post-abandonment of the northern and southern columned halls. This material presents a complete sequence of pottery spanning the late Middle Kingdom and early Second Intermediate Period before the much more visible cultural change in pottery shapes and fabrics that dominates the later part of this period, the 17th Dynasty, took place. In Upper Egypt most of the previously published data comes from cemetery contexts that do not allow for observing the subtle changes in the corpus of the early Second Intermediate Period which still relates strongly to the traditions of the late Middle Kingdom.

The keynote lecture at the workshop was given by Josef Wegner, whose important discovery of king Woseribre Seneb-Kay and a so far completely unknown cemetery dating to the Second Intermediate Period in South-Abydos has made headlines recently. It confirms the long-held hypothesis first expressed by Detlef Franke and then taken up again by Kim Ryholt about the existence of a separate dynasty of kings ruling from Abydos which he first voiced in his 1997 publication entitled »The Political Situation of the Second Intermediate Period in Egypt«. His initial hypothesis was based solely on the distribution of monuments and royal names that can almost exclusively be associated with the important region and town of Abydos. Wegner's results from the excavations opened up many additional questions, which he addresses in his contribution to the proceedings such as the exact chronological place of these Abydos kings and the peculiar circumstances of a violent death in battle for Seneb-Kay. Questions about regional conflict between various centers of power are in order and it is also evident that the political fragmentation during the Second Intermediate Period was even more complex than previously thought. Wegner discusses the place of Senebkay, whose *prenomen* was Woseribre, within the dynastic lines of Upper Egypt, particularly his relation to the 16th Dynasty in Thebes with which he was most

likely overlapping. The detailed analysis of the decoration of the interior of the tomb of Seneb-Kay shows good parallels to the painter who decorated the tombs of Sobeknakht II at El-Kab and Horemkhauef located in Hierakonpolis. The comparable characteristics noted in the paintings and decoration of all three tombs make Seneb-Kay a contemporary to the mid-16th Dynasty group of rulers who were called Nebiriau I and II, Semenre and Bebiankh based in Thebes. Wegner then discusses the possibility of a chronological overlap between the 13th Dynasty rulers with the emergent 16th Dynasty in Thebes that has been proposed by several scholars in the past and which in the light of the new evidence from South Abydos is becoming a very strong possibility. A last point that is addressed in his article concerns the close similarity of Seneb-Kay's *prenomen* following a specific pattern which indicates him being a contemporary to the Hyksos king Khyan. Linking the newly discovered rulers buried in South Abydos, in proximity to several tombs of mid-13th Dynasty kings of the Sobekhotep group, to the mid-16th Dynasty in Thebes and the earlier Hyksos, in particular Khyan, of the 15th Dynasty, presents a major step forward in our current reconstruction of the political situation of the first half of the Second Intermediate Period. The history of this period had been much less well-known than the later Second Intermediate Period until the recent discoveries at Tell el-Dab^ca, Abydos and Tell Edfu.

Given these three major archaeological discoveries, the other participants of the workshop contributed with a variety of presentations and discussions focusing on a re-evaluation of the absolute and relative chronologies mainly addressing two important issues, the place of Khyan in the 15th Dynasty and the possible proximity of him to the reign of Sobekhotep IV, a king of the 13th Dynasty whose sealings were found in the same context as those of Khyan at Tell Edfu.

The implications for the historical and absolute chronologies

The second theme discussed in much depth by a number of experts in the field of the ancient Egyptian chronology was considered in view of the new discoveries specifically addressing where Khyan should be placed within the 15th Dynasty, the overall length of this dynasty and the relation and chronological distance/proximity of Khyan to the rulers of the 13th Dynasty, particularly Sobekhotep IV.

One of the most debated and contentious topics over the past few years has centered around the publication of a sequence of radiocarbon dates consisting of short-lived samples from Tell el-Dab^ca. The heart of this debate is related to the apparent discrepancy between the historical/archaeological dates provided by the excavators based on the stratigraphic and ceramic evidence and the range of the absolute dates from the ¹⁴C analysis that was conducted in three different laboratories in Europe. Felix Höflmayer in his contribution to the workshop synthesizes this conflict and summarizes the current state of the debate specifically relating to Khyan and his place within the chronology of the Second Intermediate Period. His approach also takes into account the archaeological evidence for Khyan within the wider Eastern Mediterranean region and the overall synchronization of the Egyptian chronology and neighboring regions of the Aegean and the Levant. This research is strongly based on the validity of the radiocarbon dates which show a discrepancy of 100–120 years to the historical reconstructions and dates proposed by Manfred Bietak. Höflmayer reviews the chronological data in relation to the relative chronological position of Khyan based on the find spots at Tell el-Dab^ca and Tell Edfu. Using a statistical approach for the modelling of 40 short-lived radiocarbon dates in order to prevent any subjective exclusions of data as outliers, he employs the recently published INTCAL13 calibration curve which clearly confirms the discrepancy between the proposed historical dates and those shown by the ¹⁴C samples. Interestingly, the place of Khyan in the absolute chronology as indicated by the radiocarbon dates obtained from Tell el-Dab^ca for stratum E/1 and the transition to D/3 fits extremely well to the historical dates proposed for the 13th Dynasty king Sobekhotep IV. Furthermore, this also suggests a relatively good agreement between radiocarbon dates and the Egyptian

historical chronology that was already commented upon by the team of researchers from Oxford University who have tested the correlation of these two chronologies in a recent publication¹. Up to now the only exception to the otherwise coherent dates and correlations are those radiocarbon dates obtained from Tell el-Dab^{ca}. Unfortunately, this discussion was not taken up by most of the other experts in the field, which demonstrates that the role of absolute chronological dates and the use and reliability of radiocarbon dating for ancient Egypt has still not received a widespread acceptance as it is the case in neighboring disciplines.

David Aston, the long-term ceramicist for the excavations at Tell el-Dab^{ca} also provides a lengthy chronological overview testing various scenarios for the place of Khyan within the Egyptian chronology, bringing together a large amount of data from a wide variety of archaeological and historical sources including king-lists and ceramic sequences. His results show numerous probable models for Khyan's position within the 15th Dynasty, and his regnal years expressed in absolute dates. The results of his analysis very much highlight the continuous problems that cannot be entirely solved even now and are still in need of more data in order to advance our understanding of these matters. Too many factors remain vague and have multiple possible solutions that make any secure interpretations of the evidence impossible.

The fragmentary and often contradictory nature of the current data is the main obstacle for advancing several important questions centering around the length of the Second Intermediate Period, a topic that is also picked up on by Thomas Schneider. In addition, crucial clues as to the reconstruction of the overlaps between kings ruling from Thebes in addition to the synchronization of other cultures within the Eastern Mediterranean are still a matter of debate. Thomas Schneider focuses specifically on the historical sources, the Turin King List (pTurin) and the tradition of Manetho, to reconsider the total length of the 15th Dynasty. Traditionally the summation in the Turin King List has been read as a total of 108 years but the traces of the actual numbers in Hieratic are not entirely complete and well-preserved. By using the total regnal years that are mentioned in the surviving copies of Manetho's »History of Egypt« in addition to the traces of numbers in the pTurin, Schneider proposes to increase the duration of the 15th Dynasty to 160 or 180 years, which according to his interpretation of the Hieratic traces is entirely possible. This then offers a solution for a chronological overlap between the 13th Dynasty, when those kings had lost control over the northern parts of Egypt some time during the second half of this dynasty, and the rule of Khyan, putting the findings of Tell Edfu into a plausible framework for the chronology of the early the Second Intermediate Period.

Reconstructing the political history of the late Middle Kingdom and Second Intermediate Period

One important topic that was addressed in view of the new findings is the implication for the current understanding of the political history of this time which everybody agreed upon needs to be adjusted according to the presence of the Hyksos sealings in Tell Edfu as well as the new royal necropolis at South Abydos. Daniel Polz offers a comprehensive reconstruction of the Theban rulers during the 17th Dynasty and their influence in Upper Egypt, which includes numerous new results that were obtained by fieldwork carried out during the past 10–20 years in this region, foremost at the sites of Elephantine, Tell Edfu, El-Kab and the western desert routes in addition to monuments left by some of these rulers elsewhere in Upper Egypt providing a glimpse of their zone of control. He is also able to refute the now outdated view that the Hyksos occupied and

¹ C. Bronk Ramsey – M. W. Dee – J. M. Rowland – T. F. G. Higham – S. A. Harris – F. Brock – A. Quiles – E. M. Wild – E. S. Marcus – A. J. Shortland, Radiocarbon-based Chronology for Dynastic Egypt, *Science* 328, 2010, 1554–1557; A. J. Shortland – C. Bronk Ramsey, Radiocarbon and the Chronologies of Ancient Egypt (Oxford 2013).

controlled Thebes for a short time period at the end of the Second Intermediate Period. The reign of king Nub-kheper-re Antef who reigned as part of the 17th Dynasty from Thebes is a particular focus of his investigations and the numerous attestations for this king's building activities provide good evidence for a fully functional state on the political, economic and administrative levels which allowed for expeditions to acquire important raw materials in the Eastern Desert and Red Sea coast in addition to having been involved in long-distance trade via the oases routes. The threat of the Hyksos rulers in the north seems to have been much less perceived by the Egyptians before the actual military conflict starts under the last rulers of the 17th Dynasty, probably under Seqenenre Ta'a. The real enemy for Upper Egypt was in fact the Kingdom of Kush, whose rulers conducted military raids into Upper Egypt as has been indicated by the inscription found in the tomb of Sobeknakht at El-Kab in addition to the fact that a lot of Egyptian statues and objects probably obtained from these raids were discovered during the excavations of the royal tombs at the capital in Kerma, south of the 3rd Cataract. Polz emphasizes that the Egyptian state as ruled by the 17th Dynasty was strong on a regional level and remained an important player within the political sphere of the Second Intermediate Period despite the obvious fragmentation of the country. In this respect the finds of clay sealings from Tell Edfu also fit quite well, indicating a diplomatic or economic relationship between the Hyksos and important regional urban centers in southern Egypt. This historical overview based on current archaeological data is particularly useful for a better understanding of the political process marked by the loss of political unity of the country. In the past, most reconstructions of the history of this period have been dominated by textual sources that describe events relating to the very end of this time period. Polz demonstrates in his review of the achievements and activities of the rulers based in Thebes that they were far from being a politically and economically weak power within the political landscape at this time.

Vera Müller presents an objective and detailed review of the most relevant problems and questions that are still open for debate and which are difficult to answer even with taking into account the new evidence. Her contribution to the workshop highlights why the debate about some essential questions regarding the reconstruction of the history of the Second Intermediate Period is still ongoing, mainly because there is not enough evidence at hand to draw firm conclusions. The main issues she addresses concern some of the most pivotal topics relating to the basic definition of this period, when it started, which is particularly problematic, and how we should conceive the overlap of the various dynasties involved. The problems arise from the lack of good source material, which only in rare circumstances provides concrete evidence for kings ruling different parts of the country simultaneously. While we are on better grounds towards the end of the 15th and 17th Dynasties for which we have numerous textual sources, the beginning of the Second Intermediate Period is much more difficult to define. Traditionally, the end of the political unity in Egypt is considered as the moment when this so-called intermediate period starts, which is marked by a division of the country into different regional centers of power. Critical to this is the takeover of the eastern Delta by rulers of foreign origins identified as the Hyksos kings but the precise relation to the Egyptian 13th Dynasty is still unclear. Müller provides a detailed outline of the prevailing studies that have been published about the history and definition of the Second Intermediate Period which shows clearly the issues that remain difficult to resolve. Among those points is also the abandonment of the royal residence called Itj-Tawy, which is conventionally thought to have been located near the modern village of el-Lisht where the mortuary complexes of two 12th Dynasty rulers have been excavated, the pyramids of Amenemhat I and Senwosret I. However, recent scholarship has expressed doubts in this attribution because there are also arguments that can be made for Itj-Tawy having been situated in the Memphite region. Another point of discussion is the rise of the rulers based at Thebes. Again the evidence from Tell Edfu and Abydos points to a more complex picture than previously assumed. Lastly, Müller emphasizes the implications of using the various historical concepts that exist for our understanding and definition of the Second Intermediate Period, which also affect how we interpret the changes in material culture, another important aspect within this debate. Even though most scholars agree that political changes do not

automatically occur concurrently to cultural changes and developments, a fact that can be demonstrated especially in Upper Egypt where for example the ceramic traditions of the late Middle Kingdom prevail much longer than in the northern parts of the country. Müller concludes with the remarks that unless new data is unearthed, the current debate leaves too many important questions open. The recent discoveries at Tell el-Dab^a, Abydos and Tell Edfu are important steps for advancing the research about the Second Intermediate Period but they are not enough to be more definite about the precise political events marking this time.

Scarabs and clay sealings: typologies and motifs in view of chronological implications

Daphna Ben-Tor's contribution to the proceedings is focused on the implications of the sealing corpus discovered in the administrative building complex at Tell Edfu. She questions the validity of the excavators' preliminary conclusions and reviews the published sealings from Tell Edfu, which include motifs that can be attributed to the late Middle Kingdom, Second Intermediate Period in Egypt and the so-called Late Palestinian series. She strongly argues in favor of the existence of a centralized workshop where scarabs were manufactured during the late Middle Kingdom which ceased its production with the abandonment of the royal residence of Itj-Tawy. The fact that the excavated clay sealings from the northern columned hall complex at Tell Edfu also display features that are typical for the later periods is for her a clear indication that the late Middle Kingdom scarabs that produced these sealings were simply reused by later officials. In her opinion it is absolutely impossible to envision any closer chronological proximity between Sobekhotep IV and Khyan based on the current understanding of the basic parameters of the Second Intermediate Period such as is promoted by the synchronization of Tell el-Dab^a to other sites in the southern Levant. In this respect she argues that according to the prevalent stylistic features of the current typology that has been established for scarabs in Egypt and Palestine, it is not possible to move Sobekhotep IV and Khyan closer together as was proposed by the archaeologists excavating at Tell Edfu. She further underlines her reasoning by reviewing the contexts of scarabs belonging to the Late Palestinian series to which one of the most frequently occurring motifs attested in Edfu can be assigned to. The overall evaluation of the findings at Tell Edfu clearly do not fit into the conventional reconstruction of the political and cultural history of the Second Intermediate Period which almost all of the workshop participants agreed upon and which has been the reason for organizing this gathering in the first place. As some of the contributors have pointed out previously, we are clearly lacking important data to be more affirmative on key aspects of this time frame and the results from Tell Edfu provide just a small piece to the puzzle. Ben-Tor, however, acknowledges that the findings from Edfu indicate commercial connections between the Hyksos and Upper Egypt and further confirm Khyan as an early Hyksos which was already noted based on the typology of royal name scarabs.

Another paper on scarab typology was presented by Kim Ryholt who offers a comprehensive analysis of the entire seal and sealing corpus that can be assigned to the Second Intermediate Period, in particular the 14th and 15th Dynasty, which has expanded considerably since he first conducted research on this topic in his monograph from 1997. Using statistical methods for his analysis led to several important observations about the use and sealing practices of this period. He notes the intensive use of scarabs as seals for administrative practices during the 14th Dynasty, which he defines as the group of earlier foreign rulers (the best known is king Nehesy) who were based in the eastern Delta. This phase of an intensive use of seals is followed by a dramatic decrease from the early 15th Dynasty onwards in northern Egypt that is matched by the same phenomenon in southern Egypt, namely from the 13th Dynasty to the 16th–17th Dynasties based in Thebes. He carefully proposes that this observation might also have chronological value indicating that both dynasties of foreign rulers, the 14th and the 15th, started much earlier than previously

assumed and probably overlapped considerably with rulers assigned to the 13th Dynasty. He also points out that from a stylistic point of view the 14th and 15th Dynasty scarabs were made in a centralized workshop and were part of the same continuing traditions. Ryholt's statistical seriation of the scarabs and sealings that can be assigned to these two dynasties have certainly led to some interesting results which would support his previous suggestions as to the chronological standings of the 14th Dynasty and his interpretation of the numerous clay sealings found at the granary complex within the fortress of Uronarti in Lower Nubia. In addition, he emphasizes the use of seals primarily as administrative tools, a tradition prominent for the late Middle Kingdom but which seems to have carried on into the Second Intermediate Period, which is also demonstrated by the finds from Tell Edfu and Tell el-Dab^ca.

Results, problems and priorities

As a result of this meeting, the debate and scholarly discussion that took place during the workshop and which is represented in the individual contributions, highlight clearly the points most participants were able to agree upon as well as those topics that still constitute much division and varying opinions. Almost all the participants concurred with the fact that Khyan must have reigned already in the early 15th Dynasty, however the length of his reign is not determined. The evidence from the stratigraphic sequence in areas F/II and R/III Tell el-Dab^ca in addition to the archaeological context at Tell Edfu provides good evidence for a chronological distance of Khyan to the late Hyksos Period and the 17th Dynasty. This is also confirmed by the development of typological characteristics recognizable on the royal name scarabs. Another point that found widespread support is the fact that the relationship between the early Hyksos kings and Upper Egypt could have been a peaceful one that was perhaps dominated by the exchange and trade of goods, possibly even including the contribution of these rulers to sanctuaries in Upper Egypt, which would explain the finds of blocks inscribed with the name of Hyksos kings discovered at Gebelein.

The most contentious points are still involving the absolute and relative chronologies, and the struggle to define the exact overlap of kings in Upper Egypt and the eastern Delta, the much debated radiocarbon dates from Tell el-Dab^ca and the usefulness of historical sources such as the Turin King List and the Manetho tradition. Most of the workshop participants voiced doubts about the possibility that Sobekhotep IV and Khyan reigned closer together as has been proposed by the Edfu team and it is evident that more data is necessary to draw any firm conclusions on this issue. The points of disagreement also demonstrate quite clearly the persistent gaps that still exist in the reconstruction of the Second Intermediate Period chronology, which calls for new projects working specifically on these aspects making use of a multi-faceted approach that includes a wide variety of data sources. Priorities in research should focus on the analysis of more short-lived radiocarbon samples from other sites in Egypt, notably from sites in the south, that will help to reconsider the results from Tell el-Dab^ca. Other interesting avenues of research to pursue include the analysis of the chemical properties of the sealing clay used for the sealings excavated in Edfu and to compare it to those from Tell el-Dab^ca in order to better understand the movement of commodities and to rule out a use of scarabs made in the north that were obtained by officials in the south or even the presence of administrators in Egypt, who were transferred from the Delta to Upper Egypt. Keeping these points in mind, hopefully future research will focus on these open ends and advance our understanding of one of the most debated periods of ancient Egyptian history.

David A. Aston

How Early (and How Late) Can Khyan Really Be

An Essay Based on ›Conventional Archaeological Methods‹

Introduction¹

For some time now, it has been evident that a schism exists between the dating of Khyan, based on the conventional Tell el-Dab^ca low chronology, and the high dating espoused by proponents of Carbon 14 dating², with a suggested difference of some 80 years in time between the two³. In terms of C14 one either believes that the method is sound and, therefore, Khyan must be approximately 80 years earlier than is suggested by Manfred Bietak's Tell el-Dab^ca low chronology, or one is not convinced, and thus presumes Khyan cannot be accurately dated. It is my intention, in this article, to examine how early, and how late, Khyan can really be, in terms of absolute dates, by applying conventional archaeological methods to a thorough re-examination of Khyan's position. In essence this essay grew out of the recent publication of the finds from Tell Edfu, where sealings of Sobekhotep IV were found in the same context as sealings of Khyan, with the publishers proposing that ›the presence of the nine Sobekhotep IV sealings in the same closed context as the Khyan ones suggests that these two rulers reigned probably not too far apart from each other or were even contemporary‹, and that ›it is not possible that Khyan is the immediate predecessor of Apophis. The latter ruler is firmly linked to the late 15th Dynasty and was contemporary to the Theban rulers of the 17th Dynasty.‹⁴.

There is, however, no proof for the idea that Khyan immediately preceded Apophis; this comes from an idea of Kim Ryholt, on whose 1997 work⁵ the Tell Edfu authors – Nadine Moeller, Gregory Marouard and Natasha Ayers – follow without question, although Manfred Bietak⁶, Aharon Kempinski⁷, Donald Redford⁸, Claude Vandersleyen⁹, and Thomas Schneider¹⁰ interpose (at least) one king, Yanassi, between them. Monuments from Tell el-Dab^ca indicate that Khyan is probably not the immediate predecessor of Apophis, since a prince, Yanassi, appears on a door post in which he claims to be the son of Khyan¹¹. That Yanassi was indeed a real prince, and not an administrative official on whom the title king's son was bestowed¹² is likely in light of the fact that in the Josephus redaction of Manetho a king Iannas (= Jinašši'-Ad) occurs as the successor of Apachnan (= Araq-khyran = Khyan). In a normal sequence of events, one would expect that the

¹ I am grateful to Irmgard Hein, Nadine Moeller and Irene Forstner-Müller for their comments on a preliminary draft of this paper.

² Manning 1999; Manning 2014; Bietak 2003; Bietak 2013; Kutschera et al. 2012.

³ Manning et al. 2014, 1171–1176.

⁴ Moeller et al. 2011, 107. 109; Ayers 2016, 28–30.

⁵ Ryholt 1997, 118–129.

⁶ Bietak 1980, 95; Bietak 1984, 474; Bietak 1994, 24.

⁷ Kempinski 1983, 58–78; Kempinski 1985, 130–134.

⁸ Redford 1992, 106–111.

⁹ Vandersleyen 1995, 171–178.

¹⁰ Schneider 1998, 57–75; Schneider 2006, 192–195; T. Schneider, this volume.

¹¹ Bietak 1981, 63–71.

¹² During the Second Intermediate Period the title king's son was often bestowed on administrative officials who appear to be unrelated to the royal family, cf. Shirley 2013, 553–556.

son would succeed the father, and, assuming that the reign of Iannas was not entirely subsumed into the reign of Khyan, as a co-regent, then his reign must therefore be interceded between that of Khyan and Apophis, and it is thus a reasonable assumption that Iannas and Yanassi are one and the same. The slight possibility that Yanassi could have succeeded Apophis, if Apophis directly succeeded Khyan whilst possible if, say Yanassi was born late in Khyan's life, and would have come to throne at a minimum age of 33, seems unlikely on two counts. Firstly there appears to be no place for a king between one who ruled for $40 + x$ years and Khamudi as indicated in the Turin Royal Canon, whilst at the same time he is not mentioned in any of the late 17th – early 18th Dynasty sources referring to the conquest of Avaris. Kim Ryholt's ingenious suggestion that Apophis usurped the throne, therefore cutting out Yanassi, appears to be mere speculation¹³. Indeed as preserved, the last three entries for the 15th Dynasty read:

column 10/26	10 + or 20 + or 30 + years
column 10/27	40 + years
column 10/28 [hkꜣ hꜣswt] Khamudi	

And this is followed by a summation of the total years of the Hyksos kings which is traditionally read as 108 years (but see below p. 32).

On the basis of the definite year 33 of Apophis known from the Rhind mathematical papyrus, as well as references to him in contemporary sources of Kamose and Ahmose, it is quite certain that the king of column 10/27 should be Apophis; however, there is nothing in the extant records to suggest who is the king of col. 10/26. In the Josephus version of Manetho a king Iannas occurs which is strongly suggestive of the fact that Yanassi did indeed become king, and as a successor of Khyan could easily be the king of col. 10/26, and therefore had a reign of a minimum 10 years. However since no trace of the name of the king of col. 10/26 is preserved there also exists the possibility that the king in question was neither Khyan nor Yanassi, but a successor of Yanassi.

The Rhind mathematical papyrus also contains a series of five notes which date to a year 11 of an unknown king¹⁴, and it is generally assumed that this date refers to a successor of Apophis who can only be Ahmose or Khamudi. These notes show that during this year both Heliopolis and Sile were conquered by someone referred to as »He-of-the-South«, who can only be Ahmose. An interesting aspect of these jottings is that whereas the conquest of Heliopolis is stated as an unequivocal fact, the reference to Sile says that it was besieged on the 1st month of Akhet day 23, and then *it was heard* that Sile had fallen on day 25 (or 26). The writer of this jotting therefore was not at Sile, but elsewhere, and had only heard of what had happened, and Bietak suggests that the papyrus was actually inscribed in Avaris, remaining there until the town was conquered¹⁵. If that were the case, then the year 11 almost certainly refers to Khamudi, and, indeed, this is followed by most authors¹⁶. On the other hand, Redford suggests that it was actually written in Memphis, and that sometime between year 33 of Apophis and year 11 of Ahmose, the town was conquered by Ahmose, and therefore the compiler of the papyrus was now dating by the new king¹⁷. However, since Ahmose is referred to, somewhat derogatorily, as »He-of-the-South«, the writer of these jottings may have still considered himself under the aegis of the true (Hyksos) king, which, to the writer of these jottings, would be Khamudi whose regnal date he would have used. Ryholt, however, argues that the year 11 must refer to Ahmose because, in his opinion, Khamudi only had a short reign since known monuments naming him are scarce.

For the purposes of this paper, I will follow the view that the year 11 refers to Khamudi. Since it is explicit that Sile fell in this year one can then assume that it was in Khamudi's year 11 that

¹³ Ryholt 1997, 256.

¹⁴ Ryholt 1997, 187, and references.

¹⁵ Bietak 1994, 29.

¹⁶ Cf. Franke 1988, 263; von Beckerath 1994, 115; Spalinger 2001, 299.

¹⁷ Redford 1979, 283 n. 64.

the whole of Egypt was lost to the Hyksos kings. If Ryholt is right in his assumption that Apophis directly followed Khyan, then Khyan's reign would have ended 11 (reign of Khamudi) plus 40+ years (reign of Apophis), before the conquest of Avaris, most probably in Ahmose's year 18/19¹⁸. That Khyan directly preceded Apophis, however, is contrary to the writings of Manetho as recorded by Josephus, and I am more in favour of Schneider's reconstruction¹⁹, which can be summarised in the following chart (note that Khamudi is not found in any extant version of Manetho).

Manetho (Josephus)	Reconstruction with archaeological sources	Semitic Names
Salitis	?	Šarā-Dagan (Š3rk[n])
Bnon	?	*Bin- ^c Anu
Apachnan	Khyan	(^c Apaq-)Hajran
Iannas	Yanassi	Jinašši'-Ad
Archles/Assis	Seker-Her	Sikru-Haddu
Apophis	Apophis	Apapi
	Khamudi	Halmu'di

If Schneider is right, then the idea that Khyan directly preceded Apophis, as proposed by Ryholt, is a mistaken one. Of more import, however, is Moeller – Marouard – Ayers' thesis that Sobekhotep IV and Khyan are contemporary, or, at least, not very far apart from one another. This is somewhat difficult to prove since, if Khyan did not directly precede Apophis then both kings, Khyan and Sobekhotep IV cannot be tied to any absolute dates let alone with one another.

The monumental and epigraphic evidence clearly shows that Sobekhotep IV is linked with his brothers Neferhotep I and Sihathor, but that their father was not a king, and nor were any of their sons²⁰. They are also evidently the three kings mentioned in the Turin Royal Canon under column 7 nos. 25–27, 25 being Neferhotep I, 26, Sihathor and 27, Sobekhotep IV. Unfortunately owing to various lacunae in the text, and the lack of reign lengths given for many of the kings, it is not possible to say exactly where these kings fit into the 13th Dynasty, or when they actually ruled. In 1992, Detlef Franke made Sobekhotep IV the twenty-fourth king ruling between ca. 1720 and 1710 B.C.²¹. In 1997 Ryholt made Sobekhotep IV, the twenty-ninth king of the 13th Dynasty, suggesting that he ruled around 1732–1720 B.C.²², whilst in 2006, Schneider, considered him to be the twenty-fourth king of the dynasty and dated him to between 1709 and 1701 B.C.²³. Sobekhotep IV was followed by the four kings Sobekhotep V, Ibiau, Mernefer Ay and Merhetepibre, the first three of whom reigned, according to the Turin Royal Canon for 39 years. At this point, however, a series of genealogies, the so-called El-Kab and Yauyebi Genealogies, show that ten generations of governors span the time period between Merhetepibre and Amenophis I²⁴, from which Bennett concludes, using an average of 20 years per generation, that 155 years elapse from year 1 of Merhetepibre to year 1 of Ahmose²⁵. If he is correct then the last year of Sobekhotep IV would fall 39 + 155 = 194 years before the beginning of the 18th Dynasty. With the conquest of Avaris in year 18/20 of Ahmose, then the last year of Sobekhotep IV would then fall 194 + 18/20 = 212/214 years before the end of the Hyksos Period. With a conventional dating of 108 years for the entire length of the Hyksos Period (but see below p. 32), then it would seem absolutely impossible for Sobekhotep IV and Khyan to be near contemporaries.

¹⁸ Schneider 2006, 195.

¹⁹ Schneider 1998, 57–75; Schneider 2006, 192–195.

²⁰ Ryholt 1997, 225–231.

²¹ Franke 1992, xiv. Cf. Franke 1988, 268.

²² Ryholt 1997, 197.

²³ Schneider 2006, 176. 492.

²⁴ Bennett 2002; Bennett 2006, 236–241.

²⁵ Bennett 2006, 240.

On the other hand, however, in area F/II at Tell el-Dab^a, sealings of Neferhotep I, and his predecessor, Sobekhotep III, were found in a rubbish deposit, F/II locus L637 in association with large amounts of Hyksos Period pottery²⁶, and, at first glance, this might support the Moeller – Marouard – Ayers thesis that Sobekhotep IV and Khyan are indeed (nearly) contemporary with one another. However, since this context is, in itself, a rubbish deposit, it cannot be stated whether (a) these 13th Dynasty sealings are contemporary with the Hyksos Period pottery; (b) were old sealings, at the time of their deposition; or (c) were Hyksos Period sealings made with by-then old 13th Dynasty seals²⁷.

As already indicated above Khyan is also a floating king. His exact position in the 15th Dynasty is not clear, however, he must have preceded Yanassi who is known to have been Khyan's son. Along with Apophis, Khyan is the best known of the Hyksos kings; monuments of his have been found not only throughout Egypt, but also throughout the Eastern Mediterranean, and if we make the risky similarity of number of monuments with number of years, then it is very likely that Khyan reigned for a similar length as Apophis, say 30–40 years. In this respect it is interesting to note that if Khyan is to be equated with Apachnan, then, according to Josephus, he may have reigned for 36 years and 7 months. However, little faith can be placed in this reign length figure since Josephus records that Salitis reigned for 19 years, Bnon for 44 years, Iannas for 50 years and 1 month, Apophis for 61 years, and Assis for 49 years and 2 months, which makes a total of 259 years and 10 months²⁸, which is longer than the entire Second Intermediate Period.

The Tell el-Dab^a evidence

In order to attempt a more secure dating for Khyan one needs to turn to the Hyksos capital at Tell el-Dab^a. The chronology of Tell el-Dab^a is based on a number of interlocking sequences, established, primarily through pottery correlations with other sites, and this has most recently, and most clearly, been explained in Bietak's article, »Antagonisms in Historical and Radiocarbon Chronology«, published in 2013²⁹, hence it is fairly certain that Tell el Dab^a phase G/4 is equal to Aphek phase 2³⁰, Tell el Dab^a phase G/1–3 is equal to Aphek phase 3³¹, Tell el Dab^a phase F is the same as Aphek phase 4 and Hazor stratum 4³², whilst Tell el Dab^a phases H–F are equal to Tel Ifshar phases E–H³³, and Tell el Dab^a phases H–D/1.1 are equal to Ashkelon phases 14–10³⁴. For the New Kingdom, pottery correlations link (at least part of) phase C/3 with the reign of Tuthmosis III, whilst scarabs found in level C/2 date that phase to (no earlier than) the reigns of Tuthmosis III and Amenophis II³⁵. A number of clay sealings of Khyan occur in a large pit complex, L81³⁶, in which the pottery, in my opinion, clearly belongs in Tell el-Dab^a phase E/1, with a possible extension into phase D/3³⁷. Whilst it is possible that these were old sealings at the time of their deposition, no Khyan sealings have yet been found in any earlier contexts, so it is reasonable to assume that

²⁶ Sartori 2009, 284 nos. 9370H-J and 9375H.

²⁷ Cf. Bietak 2004, 54.

²⁸ Cf. von Beckerath 1997, 136–138. Note, however, that Schneider reverses the reign lengths of Apachnan and Salitis – Schneider 1998, 70 – so that Apachnan (Khyan) would only have a reign length of 19 years.

²⁹ Bietak 2013, 76–109.

³⁰ Bietak 2013, 92.

³¹ Bietak 2013, 91.

³² Ben-Tor 2004, 45–67.

³³ Marcus 2013, 182–208.

³⁴ Bietak et al. 2008, 49–60.

³⁵ Jánosi 1994, 32.

³⁶ Sartori 2009, 284–288.

³⁷ Aston – Bader 2009, 20. This dating is disputed by Kopetzky, who wishes to date the material found in it to phase D/2, see Kopetzky 2010, 125 n. 742. However, her methodology is suspect in that she assigns small rim or base sherds to complete ›shapes‹ without real proof that such rim or base sherds come from that particular ›shape‹, and then combines a number of clearly different shapes into a single ›type‹, and, from her work, I see no justification

these sealings are contemporary with the reign of Khyan. Khyan was thus on the throne at the end of phase E/1 and the beginning of phase D/3. More sealings of Khyan were recently found in late 15th Dynasty levels in area R/III, along with pottery of which the few published pieces are similar to locus 81³⁸, but, as yet, no stratigraphic link with other areas of Tell el-Dab^ca has been published.

Much work has also been undertaken on the comparative studies of pottery found at other sites within the ancient Near East, with the result that various inter-site links have now been established (chart 1) and I am grateful to Karin Kopetzky for the use of her chart. It cannot be stressed too highly that to move any of these levels in any of these sites without reference to the others is impossible. A down-dating of a Tell el-Dab^ca phase would, of necessity involve movements in all other sites in the Near East.

A stela dated to year 5 of Sesostri III is known from area R/I, and is used as the start date for stratum K³⁹, but this is of little value. Unfortunately it can neither be correlated with the other areas of the (excavated parts of the) site which were unoccupied at this time, nor is it certain, that it was a) found *in situ*, or b) is actually an original Sesostri III document⁴⁰. Whilst it is certain that Avaris was conquered between years 18 and 20 of Ahmose, there is no archaeological evidence in any of the excavated areas of the site, for when this happened, since no destruction level has been found. The Tell areas, areas A/I-V, were generally denuded, with the latest level found being, for the main part, phase D/2. In area H, especially area H/VI, there is clear evidence of continuous occupation from phase D/3 to phase C/2.

Significantly there is no evidence of any traumatic break which could be linked to a destructive conquest of the city at the beginning of the 18th Dynasty.

Provided that the scarab of Amenophis II found in phase C/2 is not intrusive, then C/2 must date to the reigns of Tuthmosis III and Amenophis II, and accepting that each stratum covered approximately one generation, for argument's sake, thirty years⁴¹, then it is clear that phase C/3 should date to the earlier part of Tuthmosis III's reign, and, if Tuthmosis II only ruled for three years, then C/3 may have included part of the reign of Tuthmosis I. The reigns of Amenophis I and Ahmose could then be seen to fall in phases D/1.1–2, with the transition from the 15th Dynasty to the 18th Dynasty taking place on the border from phase D/2 to D/1.2 In addition there is distinct evidence of a change in material culture during the course of phase E/2, which grows very noticeably from the beginning of phase E/1 onwards, and there can be little doubt that this is direct archaeological evidence for ›Hyksos‹ culture⁴². With the generally assumed 108 year length of the Hyksos Period then with the Hyksos Period beginning during the course of phase E/2, and with an approximate 30 year length for each phase, the Hyksos Period would cover part of phase E/2 (in this model the last 18 years of phase E/2), and phases E/1–D/2 (90 years, making a total of 108). Slight adjustments to the lengths of some of these phases now indicate that phase G/1–3, C/3 and C/2 are more likely to have lasted nearer forty than 30 years, and the current Tell el-Dab^ca stratigraphy (chart 2) is thus constructed on these grounds.

Hence, as it is impossible to move any of the phases independently of one another, and nor is it possible to move Khyan from his position straddling phases E/1 and D/3, the only column which can be at all susceptible to change are the absolute dates given in the second column. These dates are based on the so-called Egyptian Low chronology with Tuthmosis III coming to the throne in 1479 B.C., and, since this date determines the date of the beginning of the New Kingdom, and hence the end of the Hyksos Period, the question of the Low versus the High chronology will need to be discussed.

for dating the pit as late as phase D/2. On the problems with regard to identifying whole shapes from rim sherds in particular respect to the Tell el-Dab^ca material see Bader 2010, 214 n. 74.

³⁸ Forstner-Müller – Rose 2012/2013, 55–66; Reali 2012/2013, 66–67.

³⁹ Bietak – Dorner 1998, 12.

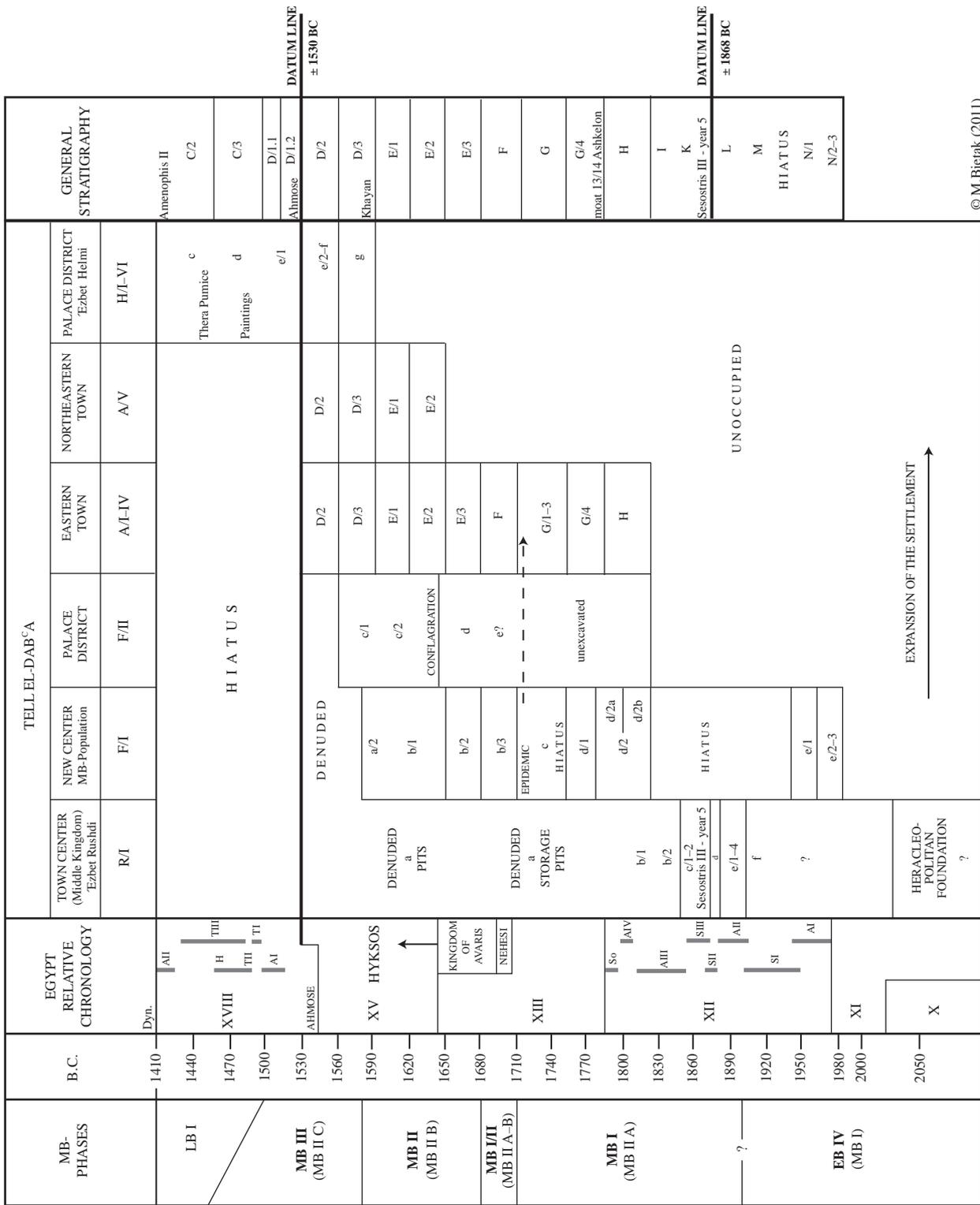
⁴⁰ Czerny 2012, 61; Höflmayer 2015, 281–282.

⁴¹ Bietak 1991, 49.

⁴² Bietak et al. 2001a, 171–181. Cf. also Bietak 1991, 51–52.

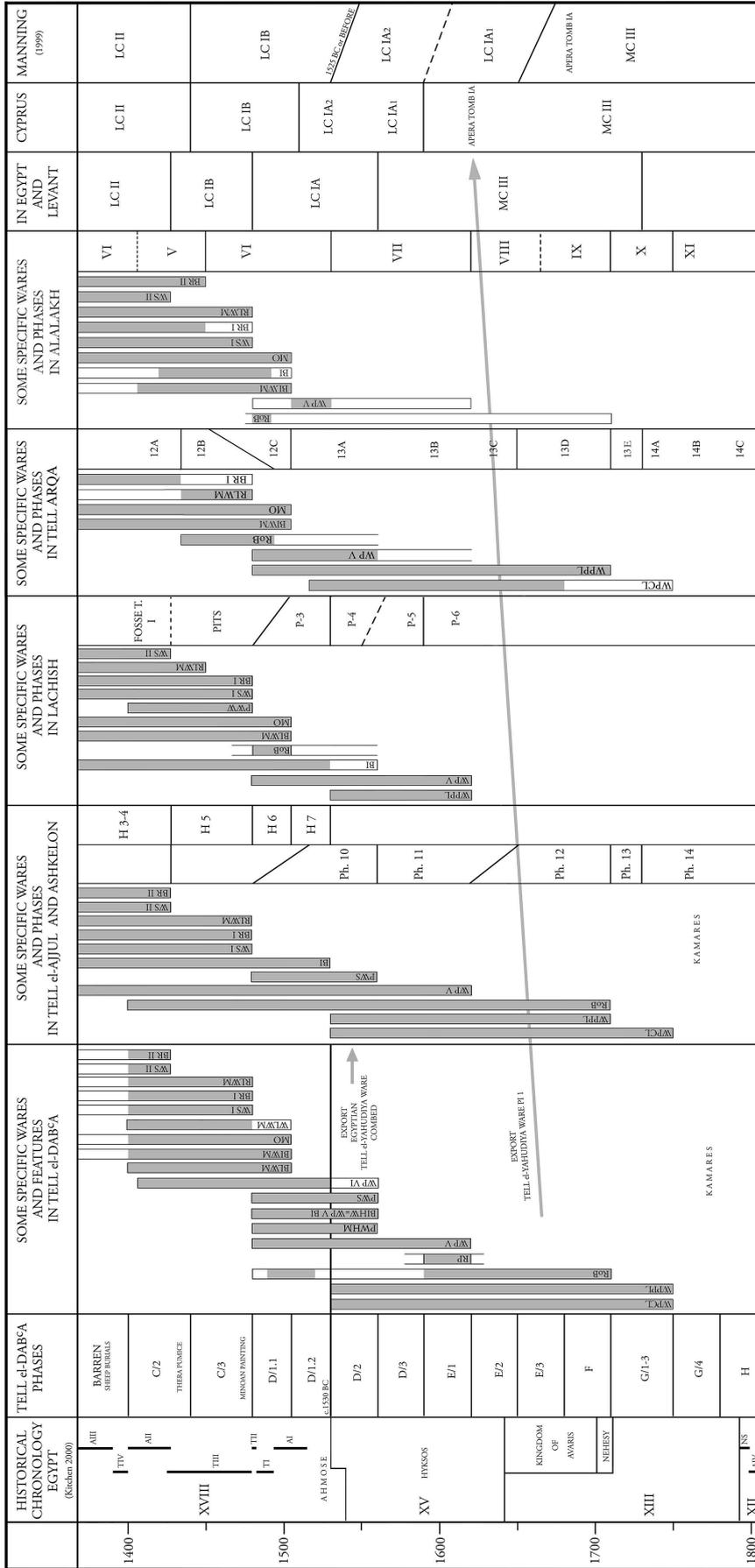
B.C.	EGYPT RELATIVE CHRONOLOGY	TELL el-DABA PHASES	TELL el-AJJUL	ASHKELON	TELL BEIT MIRSIM	LACHISH	TEL APHEK	TELL JERISHE	TEL KABRI	HAZOR	RUWEISE	BYBLOS	TELL ARQA	ALALAKH
1410	Dyn. All	C / 2	H3-4			Fosse Temple I							12A	V
1440		C / 3	H5			Pits							12B	VIB
1470	XVIII	D / 1.1	H6			P-3							12C	
1500	TII, ITI AI	D / 1.2	H7		D	P-4							13A	VIA
1530	AHMOSE	D / 2	Palace I	10		P-5	V		T. 902 3C				13B	VII
1560		D / 3			E		IV		3B				13C	VIII
1590	XV HYKSOS	E / 1	T.1416 T.1404,1406,1410C T.1410A,B	11					3A				13D	IX
1620		E / 2			F		III		T. 984	T. 73			13E	X
1650		E / 3		12	G		II		T. 503	T. 25.66 T. 8 T. 62			14A	XI
1680	KING- DOM AVARIS NEBESIT	F	T. 303B			P-6							14B	
1710		G / 1-3	T.1418,1420,1422 T.1409,1412,1417, T.1401,1408,1419	13									14C	
1740	XIII	G / 4		14									14D	
1770		H												
1800	ISO IAIV	I												
1830	A III	K												
1860	S III	L												
1890	XII IS II	M												
1920		N / 1												
1950	SI	N / 2-3												
1980	AI													
2000	XI													
2050	X													

Chart 1 Links between Tell el-Dab'a and other sites in the Near East (after K. Kopetzky 2015, unpublished)



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Chart 2 The Tell el-Dab'a stratigraphy, latest version (from W. Kutschera et al., Radiocarbon 54, 2012, 410 fig. 3)



© M. BIETAK, I. HEIN, K. KOPEZKY (SCHEM 2000)/L.E. STAGER (Leon Levy Expedition Ashkelon)/J.-P. THALMANN (Universite Paris 1)/A. YENER (University Chicago)

Chart 3 Cypriot wares and their first occurrences in the Eastern Mediterranean (from Bietak 2013, 82 fig. 8.3)

The Low versus the High chronology

Egyptian New Kingdom absolute dates have been bedevilled by three different chronologies, which Egyptologists tend to conventionally term the High, Middle and Low chronologies. Without going into great detail, this was based, to a large extent, on lunar correlations, most notably the year 52 Ramesses II Piramesse lunar date and the year 23 Tuthmosis III Megiddo lunar date, which indicate that a minimum 197 years elapse between year 1 of Tuthmosis III and year 1 of Ramesses II, and, since »there are some indications that this minimum is smaller than the historically correct interval«, this is usually rounded up to approximately 200 years⁴³. For various reasons, this crystallised into a High chronology with the limits being 1504 B.C. for the accession of Tuthmosis III and 1304 B.C. for the accession of Ramesses II, a Middle chronology with 1490 and 1290 B.C. as the borders and a Low chronology of 1479 and 1279 B.C. In 1975, the Low chronology was given a major boost by Morris Bierbrier's genealogical studies, which indicated that Ramesses II should have come to the throne sometime later than 1304 B.C.⁴⁴, although it is now known that the average age of 25 years per generation used by Bierbrier⁴⁵ is probably too short⁴⁶. During the reign of Tuthmosis III there are references to two lunar dates which record that the Battle of Megiddo took place exactly (*r mtj*) on a first lunar day in year 23 I Shemu 21, whilst in year 24 III Peret 1 preparations were made for the foundation ceremonies of the Akh Menu at Karnak in civil day 180 anticipating that the first day of the next lunar month would occur on civil day 181⁴⁷. Between 1504 and 1454 B.C., the only perfect match for both these dates would indicate that year 1 of Tuthmosis III fell in the year 1479 B.C., hence the generally accepted position. It should also be pointed out that 1490 B.C. for the »Middle chronology« is impossible on astronomical grounds, and should be corrected to 1493 B.C.⁴⁸.

However, in a previous article I have argued that, based on the evidence of wine jar inscriptions, the Low chronology may not be correct, and moreover, in the Low chronology, the first year of the reign of Tuthmosis IV is in itself problematic⁴⁹. Since Tuthmosis III's date of death in 30 III Peret of his year 54 is known with certainty, then if he acceded to the throne in 1479 B.C. he must have ruled down to 1425 B.C. He was succeeded by Amenophis II whose highest attested year date is year 23, which takes Amenophis II down to 1403/1402 B.C. At Thebes Petrie found a wine jar inscribed with a year 26 which is usually ascribed to Amenophis II, which would imply that he ruled into his twenty-sixth year, (thus equivalent to 1400/1399 B.C.), whilst Manetho appears to credit Amenophis II with 31 years (making a reign from 1425–1394 B.C.). It is not entirely certain, however, that this year 26 is really that of Amenophis II; the association with this king is only possible because his prenomen was written, in ink, on the other side of the vessel to that of the docket, which gives the year and the name of the vintner Panehsy⁵⁰, and thus a dating to year 26 of Amenophis II includes the implicit assumption that the jar was not reused. Thus the absolute earliest that Tuthmosis IV could have come to the throne would have been in 1403/1402 B.C. (and possibly not until eight years later). Herein lies a problem since Tuthmosis IV is known to have been in contact with the Babylonian king Kara-indash (Amarna letters EA:64–65), whose demise is generally placed around 1415/1405 B.C.⁵¹, who himself was in con-

⁴³ Krauss 1985, 123; Krauss 2007, 181–182.

⁴⁴ Bierbrier 1975, 109–113.

⁴⁵ Bierbrier 1975, 113.

⁴⁶ Cf. Henige 1981, 182–184; Jansen-Winkel 2006, 271.

⁴⁷ Cf. Krauss 1985, 121–123; Krauss 2007, 181.

⁴⁸ Krauss 2007, 182.

⁴⁹ Aston 2012/2013.

⁵⁰ Petrie 1897, pls. v.3; v.5–6.

⁵¹ Cf. Brinkman 1999, 190 suggests Kara Indash had been replaced by Kadashman-Harbe I in 1405 B.C.; Sassmannshausen 2004, 62–63, where Kara-indash is dated to ca. 1450–1415 B.C.; cf. also Müller 2006, 213 fig. 3. There Horemheb is given 27/28 years with year 1 of Ramesses II in 1279 B.C. If that chart is adjusted so that Ramesses II begins in 1290 B.C., and the reigns of Sety I and Horemheb are reduced by some 15 years, the correlation between

tact with the Assyrian Assur-bel-nise-su (1417–1409/1407–1399 B.C.). On conventional Near Eastern chronologies these two kings are earlier in time than the generally accepted current position of Tuthmosis IV. Egyptologists generally overlook this problem or assume that they are right thus there must be something wrong with the Babylonian chronology which should be altered to fit the Egyptian one – as Jörg Klinger puts it »Discrepancies with Egyptian dates can easily be explained as lying in the Babylonian sources«⁵². However, if Tuthmosis IV came to the throne somewhat earlier, as would be necessary if Tuthmosis III came to the throne in 1504 or 1493 B.C., then all three would indeed be contemporary with one another.

The length of reign of Tuthmosis II

The conventional Low chronology comes under further attack when one considers the reign of Tuthmosis II. Manetho gives Tuthmosis II 13 years, but in 1964 Erik Hornung noted that a 13 year reign did not suit the archaeological record for this king, but a three year reign would, and he suggested a revision of Manetho's 13 to 3 years⁵³, a position which he has defended ever since⁵⁴. In 1987 a three year reign was also postulated by Luc Gabolde who studied the number of extant monuments, principally scarabs, the officials attributable to his reign, and his lack of a mortuary temple⁵⁵. This has long been generally accepted but in 2010, Thomas Schneider re-examined the evidence, and plausibly showed that Tuthmosis II should indeed be accredited with a 13 year reign⁵⁶, which, if true, pushes back the beginning of the New Kingdom by a further 10 years. Thus, if it is accepted that Tuthmosis III came to the throne in 1504 (High) or 1493 B.C., (Middle chronology) then Tuthmosis II with a 13 year reign would have ruled in 1517–1504 (Ultra-High) or 1506–1493 B.C. (Middle). I have earlier made a distinction between a High chronology in which Tuthmosis III came to the throne in 1504 and Tuthmosis II only having a three year reign, which would thus bring the beginning of the New Kingdom down to around 1565 B.C. and an Ultra-High chronology in which Tuthmosis II ruled for 13 years, thus bringing the beginning of the New Kingdom down to around 1576 B.C. Tuthmosis I with a reign of 13 years (literally 12 years 9 months) would have reigned between 1530 and 1517 B.C. (Ultra-High) or 1519 and 1506 B.C. (High), Amenophis I with a reign of 21 years, between 1551 and 1530 B.C. (Ultra-High) or 1540 and 1519 B.C. (High), and Ahmose with a reign of 25 years between 1576 and 1551 B.C. (Ultra-High) or 1565 and 1540 B.C. (High). With the conquest of Avaris taking place sometime between years 18 and 20 of Ahmose, then the conquest of Avaris would then fall in 1558–1556 B.C. (Ultra high) or 1547–1545 B.C. (High chronology).

The pottery from Tell el-Dab^a H/VI phase C/3: a) the Cypriote pottery

One of the major scientific results of the Tell el-Dab^a excavations is the stratified sequence of Cypriote pottery found there⁵⁷, which, for the site of ^eEzbet Helmi area H/VI, with which I am most familiar may be listed as following:

Tuthmosis IV and the Babylonian Kara-indash and the Assyrian Assur-bel-nise-su is still impossible if both the Egyptian and Mesopotamian chronologies are »correct«.

⁵² Klinger 2006, 315.

⁵³ Hornung 1964, 32.

⁵⁴ Most recently, Hornung 2006, 200–201.

⁵⁵ Gabolde 1987, 61–81.

⁵⁶ Schneider 2010, 389–393.

⁵⁷ Cf. Maguire 1992; Maguire 1995; Maguire 2004; Maguire 2009b; Hein 2001b; Hein 2007; Hein 2009; Bietak – Hein 2001; Fuscaldo 2003; Fuscaldo 2009; Hein – Stidsing 2013.

C/2 (H/VI relative c)	Bichrome, White Slip I, Base Ring I, White Painted VI, Black Lustrous, Base Ring II, Red on Black, White Lustrous, White Slip II
C/3 (H/VI relative d)	Bichrome, White Slip I, Base Ring I, White Painted VI, Black Lustrous, White Lustrous, Red Lustrous Wheel-made-ware
D1.1 (H/VI relative e/1.1)	Bichrome, Proto White Slip
D1.2 (H/VI relative e/1.2)	Bichrome, Proto White Slip
D/2 (H/VI relative e/2)	Bichrome, Proto White Slip
D/2 (H/VI relative f)	Red on Red
D/3 (H/VI relative g–h)	White Painted V

Moreover this same sequence of pottery, in the same stratigraphic order, is found throughout the entire Near East, and, whilst there is some dispute as to when, and where, the Late Cypriote IA styles (in the above chart, White Painted V, Red on Red, Bichrome and Proto White Slip, to which can be added Proto Base Ring, although no sherd of the latter has yet been found in ^cEzbet Helmi), were produced⁵⁸, there can be no doubt that this general sequence cannot be changed. Whilst this might suggest that the Cypriot wares are of little use for dating purposes, thankfully there does seem to be a general consensus that the Late Cypriote IB styles (White Slip I, Base Ring I, Lustrous wares), were produced uniformly throughout Cyprus⁵⁹. Recently much work has been done on White Slip wares⁶⁰, Red, White and Black Lustrous wares⁶¹, and Bichrome ware⁶², without, however, adding to the exact dating of these wares. For our purposes, however, the most important ware is Base Ring I, which is first attested in ^cEzbet Helmi phase C/3⁶³, since the first occurrence of Base Ring I in Egypt has been the subject of heated debate since the late 1960's. A conference devoted to the chronology of Base Ring ware, held in Stockholm in 2000, resulted in the publication of several Base Ring I sherds from Saqqara, Tell el-Ajjul and ^cEzbet Helmi⁶⁴, but did little to elucidate the dating of this ware in real terms, nor when it first appeared in Egypt, except for a mention by Irmgard Hein of an unpublished piece from Elephantine which appears to be ›reasonably dated‹ to the reign of Tuthmosis I⁶⁵.

The dating of Base Ring ware found in Egypt has long been disputed. On one side stand Robert Merrillees, who believes that Base Ring I was imported into Egypt during the Second Intermediate Period⁶⁶, a position followed by Janine Bourriau⁶⁷, and this finds some support from Celia Bergoffen who suggests that the earliest Base Ring ware found in Canaan arrived during the MB IIC⁶⁸. On the other side of the fence are Eliezer Oren⁶⁹ and (at first) Kathryn Eriksson⁷⁰ who are (were) strongly of the opinion that Base Ring I ware was not imported into Egypt, or elsewhere into the Levant, before the reign of Tuthmosis III (Oren) or just before (Eriksson). Merrillees has listed 85 Egyptian tomb groups containing Base Ring I vessels which he dated earlier than the reign of

⁵⁸ Cf. Herscher 2001, 19; Manning 2001, 80–83.

⁵⁹ Cf. Herscher 2001, 19; Manning 2001, 80–83.

⁶⁰ Cf. Karageorghis 2001; Eriksson 2007; Maguire 2009a.

⁶¹ Cf. Hein 2007.

⁶² Artzy 2001; Karageorghis 2001; Bietak 2001; Hein 2001b, 231–242; Hein – Stidsing 2013.

⁶³ For the Base Ring ware from ^cEzbet Helmi see Hein 2001b, 242–243, and Fuscaldo 2003. Note that no Base Ring ware was found in any of the earlier levels, and the piece(s) referred to by Maguire 1992, 117 fig. 2, as deriving from phase D/2 come from the Tell and are surface finds without any real dating evidence.

⁶⁴ Herscher 2001; Merrillees 2001a; Bergoffen 2001; Hein 2001b, 242–245.

⁶⁵ Hein 2001b, 243, with n. 17.

⁶⁶ Merrillees 1968, 192; Merrillees 2001a, 23–30.

⁶⁷ Janine Bourriau has consistently dated a burial found at Saqqara, Saqqara (NK) 3507, which contained a BR I juglet to the reign of Amenophis I: Bourriau 1981b, 31–32; Bourriau 1991a, 140.

⁶⁸ Bergoffen 2001, 48; Bergoffen 2005, 71. Cf. also Bietak 1991, 58; Bietak 2000, 28; Manning 2014, 121–122 n. 559.

⁶⁹ Oren 1969.

⁷⁰ Eriksson 2001.

Tuthmosis III⁷¹, but only two of these tomb groups were datable to a given pharaoh. One vessel, Cairo JE 21021, was found in the tomb of Minmontu, with a stone vessel, CG 18483, inscribed with the name of Ahmose⁷², but stone vessels were often placed in tombs long after they were originally made, whilst the other vessel comes from a tomb group which contained scarabs of both Tuthmosis I and II⁷³, so the tomb group can be no earlier than the reign of the latter. Oren, one year after Merrillees published his study, considered that the dates of all Merrillees' pre-Tuthmosis III groups were unreliable⁷⁴, and dated them into Merrillees' phase XVIII B (Hatshepsut – Tuthmosis III) at the earliest. Eriksson, basing her conclusions on the then traditional low Tell el-Dab^ca chronology (cf. below, Scheme a) re-emphasized this belief in 2001, though, on the basis of the Minmontu group, did allow for a possible earlier introduction of the ware, concluding, at that time, that »while there are some contexts which may support the claim that BR I occurred early in the New Kingdom there still seems to be no solid evidence for the claim that BR I began in the late Hyksos Period«⁷⁵. In 2007 she abandoned her low position since »a number of recent archaeological discoveries have led to the argument that some Base Ring I occurs quite significantly before the New Kingdom«⁷⁶.

However, just for the sake of argument let us suppose that the Base Ring I vessel and the stone vessel of Ahmose found in the tomb of Minmontu are indeed contemporary with the reign of Ahmose, and that Merrillees and Bourriau are right in their belief that Base Ring I ware was already present in Egypt at the beginning of the 18th Dynasty. On this scenario, the beginning of phase C/3 can be, but does not need to be, as early as the reign of Ahmose. Accepting the Merrillees/Bourriau, and Eriksson's latest dates for Base Ring I ware also has the effect of lowering the first appearance of White Slip I ware since it also occurs in the same levels as the Base Ring I ware, with Eriksson now suggesting that White Slip I first appears in Cyprus around 20–30 years before the beginning of the Egyptian New Kingdom⁷⁷. If this should prove to be correct then its first appearance in Cyprus would be co-eval with, on the conventional Tell el-Dab^ca dating, Tell el-Dab^ca phase D/2, hence its first occurrence in phase C/3 is, on conventional Tell el-Dab^ca chronology some 30–60 years later⁷⁸. More significantly, if White Slip I first appeared in Cyprus around 20–30 years before the beginning of the New Kingdom in Egypt, it ties in very well with the White Slip bowl found on Santorini buried beneath the ash layer⁷⁹.

The ^cEzbet Helmi evidence also ties Base Ring I ware and White Slip I with Red Lustrous ware (cf. chart 3)⁸⁰. The earliest presumed contexts in which (published) Red Lustrous Wheel-made ware appear are Gurob 27, Aniba SA29, Memphis RAT 349 and Memphis RAT 308/327/334 at Kom Rabi^ca⁸¹. Of these Memphis RAT 349 is assumed to have a *terminus ante quem* of the reign of Tuthmosis I, since it is overlain by RAT 308 which contained a scarab of that king, which if it were not an old one at the time of its deposition would date RAT 308 to the reign of Tuthmosis I⁸². Memphis RAT 305 and 365, dated by Bourriau to the reigns of Ahmose – Amenophis I, also included sherds of Cypriote Red Lustrous Wheel-made ware in addition to a body sherd of a Base Ring I juglet⁸³. Gurob 27, which has no internal dating evidence but also contained Base Ring ware, was

⁷¹ Merrillees 1968, 147–168.

⁷² Tomb of Minmontu. Cf. Legrain 1908, 55 no. 12; Merrillees 1968, 120.

⁷³ Carnarvon – Carter 1912, 64–88 pl. lxxviii.1; Merrillees 1968, 120.

⁷⁴ Oren 1969, 148

⁷⁵ Eriksson 2001, 58.

⁷⁶ Eriksson 2007, 44. Cf. also Eriksson 2016, 249.

⁷⁷ Eriksson 2007, 44. Cf. also Manning 1999, 170–190; Manning 2014, 39–41.

⁷⁸ Cf. chart dealing with the comparison of Cypriote wares in Bietak 2013, 82, where C/3 begins with the end of the reign of Tuthmosis II. On p. 79, however, phase C/3 begins with the beginning of the reign of Tuthmosis I.

⁷⁹ Merrillees 2001b, 89–93; Merrillees 2009, 248.

⁸⁰ Cf. also Hein 2007, 96.

⁸¹ Eriksson 1993, 67–70.

⁸² Eriksson 1993, 69.

⁸³ Bourriau 1991a, 136.

dated to the reign of Amenophis I by the excavators, a date challenged by Oren who dated it to the reign of Tuthmosis III, although in a re-examination of this tomb group Eriksson states that it »does not seem necessary that this tomb should date as late as the reign of Tuthmosis III«⁸⁴. Aniba SA 29 was dated to the reign of Amenophis I since a scarab of that king was found in the tomb. A number of other tomb groups, such as Aniba S82, Aniba S98, Aniba SA 30, Deir Rifeh 1, Lahun K1.4, Lahun 5, Moalla 200, Quban 169, Quban 231, Saqqara NE.1, Tell el-Yahudieh 54 and Abydos D102, all of which contained Red Lustrous Wheel-made ware may also be earlier than the reign of Tuthmosis III, although the evidence for these groups is more ambiguous⁸⁵. Nevertheless there does seem to be a body of evidence which indicates that Base Ring I ware, White Slip I ware and Red Lustrous Wheel-Made ware were all present in Egypt before the reign of Tuthmosis III.

The pottery from Tell el-Dab^ca H/VI phase C/3: b) the Egyptian pottery

Whilst a full discussion of the pottery from Tell el-Dab^ca phase C/3 is a separate study in its own right⁸⁶, there is no doubt that some of its finds ready parallels in deposits clearly attributable to the reign of Tuthmosis III, particularly in burials with scarabs or sealings of this king⁸⁷, among building materials associated with Hatshepsut's temple at Deir el-Bahri⁸⁸, and in foundation deposits linked to Tuthmosis III⁸⁹; and, if this material dates only from the reign of this king then phase C/3 must be no earlier than this, but is the dating of this particular style of pottery so fixed? Irmgard Hein has already suggested that the pottery from phase C/3 dates to the reign of Hatshepsut – early Tuthmosis III, but with the possibility that it could start as early as Tuthmosis I⁹⁰, which, if true, would necessitate an earlier dating for Base Ring I, as Hein has already foreseen⁹¹ and, thus also, White Slip I ware.

One of the more interesting decorative schemes found on the pottery of stratum C/3 is the so-called splash decoration. Pots with such decoration are not uncommon, and, with one exception, Fadrus 195 which is dated to a pre-Hatshepsut level by Lana Troy, most can be dated to the reigns of Tuthmosis III – Amenophis II⁹², thus the examples from ^cEzbet Helmi area H/VI stratum C/3 seem to fit best somewhere within the reign of Tuthmosis III, but when did this decorative scheme begin? At Memphis Janine Bourriau has published a deposit, RAT 530, that includes a bowl with splash decoration⁹³, which she dated to, at first, the reign of Amenophis I⁹⁴, and subsequently, less dogmatically, to anywhere between year 22 of Ahmose and the end of the reign of Tuthmosis I⁹⁵. Of course it is possible that this type of vessel with splash decoration may have a long life-span, and examples could also have been produced much earlier with the vessels found in Fadrus 195 and Memphis RAT 530 being cases in point.

Memphis RAT 530 is particularly important since it also included a sherd, RAT 530.1301, of an Aegean vessel. Although the sherd is not very large, current opinion favours its identification

⁸⁴ Eriksson 1993, 69.

⁸⁵ Eriksson 1993, 70–74.

⁸⁶ For some of the Egyptian pottery from this phase, see Hein 1994a; Hein 1998; Hein 2001a; Hein 2007; Aston 2007; Fuscaldo 2007.

⁸⁷ For example Lilyquist 2003, 63–106.

⁸⁸ Szafranski 1992; Rzeuska 2001.

⁸⁹ Szafranski 1997.

⁹⁰ Hein 1998, 554; Hein 2001a, 140; Hein 2001b, 242.

⁹¹ Hein 2001b, 242–243.

⁹² Cf. Aston 2006, 65–74, with references.

⁹³ Bourriau – Eriksson 1997, 114 fig. 6 no. 7.

⁹⁴ Bourriau 1991b, 18.

⁹⁵ Bourriau – Eriksson 1997, 108.

as a fragment of a Minoan Late Minoan IB bridge spouted jar⁹⁶. As with the dating of Cypriote Base Ring I ware, there are two schools of thought relating to the dating of Late Minoan IB. On the Low chronology such as that followed by Peter Warren and Vronwy Hankey⁹⁷, and, at first, Eriksson⁹⁸, who argue that the start of Late Minoan IB is co-eval with the beginning of the reign of Tuthmosis III, a correlation of this Late Minoan IB bridge spouted jar with the reign of Ahmose (perhaps earlier, if the sherd were residual) would be impossible, but a dating to the very end of the reign of Tuthmosis I would be more acceptable since this would only need a slight adjustment to their dates. However, not long before this sherd was discovered, Barry Kemp and Robert Merrillees had argued that Late Minoan IB appears to overlap with the later part of the Hyksos Period and the first part of the 18th Dynasty⁹⁹, and this view has been championed in recent years by Sturt Manning¹⁰⁰. On the Kemp/Merrillees/Manning high chronology, Bourriau's dating of RAT 530.1301 would be perfectly acceptable.

No dates are given for the early New Kingdom levels at Memphis in the final excavation report¹⁰¹, nor in the final pottery analysis¹⁰², but a number of preliminary reports, correlate certain contexts with king's reigns, and from these, the following table showing the context, some of the pottery wares found, and Bourriau's suggested date can be produced:

Memphis Level III

308/327/334	Red Lustrous Wheel-made ware	Tuthmosis I
349	Red Lustrous Wheel-made ware	

Memphis Level IV

305–365	Base Ring I, Black Lustrous, Red Lustrous Wheel-made ware, Black Rim bowls	Ahmose-Amenophis I
452	Kerma ware	pre Tuthmosis I
530	Splash Decoration, LM IB	Ahmose-Tuthmosis I
536	contemporary with, or earlier than, 530	

Memphis Level V

Top of Sand Layer

289		Ahmose-Amenophis I
531 [contemporary with 289]		
740	Black rims	
707	Marl D amphora	
758	Ring burnishing	

Bottom of Sand Layer

782		
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⁹⁶ Warren – Hankey 1989, 139; Bourriau – Eriksson 1997, 95–120; Manning 2014, 202–204. Note, however that Wiener 2003, 371, still prefers to see it as LM IA, though this is perhaps influenced by the supposed date of the context.

⁹⁷ Conveniently, Warren – Hankey 1989, 138–144; Warren 1995, 13; Warren 1998, 326.

⁹⁸ K. Eriksson in: Bourriau – Eriksson 1997, 98.

⁹⁹ Kemp – Merrillees 1980, 254.

¹⁰⁰ Conveniently, Manning 2014, 202–208.

¹⁰¹ Jeffreys 2006.

¹⁰² Bourriau 2010.

In a previous article I have suggested that the Egyptian pottery from Memphis, Kom Rabia Levels III–V are contemporary with the Tell el Dab^a, ^cEzbet Helmi area H/VI phases C/3 and C/2¹⁰³, and are thus of the same date, whatever that is in real time, as can be seen in the following table showing the phases, some of the pottery wares found, and Bietak's suggested date of the phase.

^cEzbet Helmi

C/2	Base Ring I, White Slip I, White Painted VI, Black Lustrous, Base Ring II, Red on Black, Bichrome, White Lustrous, White Slip II, Marl D, Black Rims, Ring Burnishing, Splash Decoration	Tuthmosis III – Amenophis II (2006) Tuthmosis III – Amenophis II (2008)
C/3	Base Ring I, White Slip I, Red Lustrous Wheel-made Ware, Black Rims, Ring Burnishing, Marl D, Splash Decoration	Tuthmosis III (2006) Tuthmosis I–III (2008)
D/1.1	Bichrome, Proto White Slip, Black Rims	Amenophis I – Tuthmosis II (2006) Amenophis I (2008)
D/1.2	Bichrome, Proto White Slip	Ahмосe – Amenophis I (2006) Ahмосe – Amenophis I (2008)
D/2	Bichrome, Proto White Slip	Apophis – Khamudi
D/3	White Painted V	Apophis

Since then a few more early 18th Dynasty deposits have been published and it is probably worth re-examining some of the evidence previously examined in my 2007 article. Before doing that, however, some comment is called for with regard to the differing dates given above for phases C/3, D/1.2, and D/1.1, especially as since that 2007 article was published, Bietak has revised his dates for the beginning of phase C/3 thus narrowing the gap between the proposed Tell el-Dab^a dates and the Memphis ones.

The 2006 dates are derived from Bietak in his jointly authored »Taureador Scenes in Tell el-Dab^a (Avaris) and Knossos« (p. 16 fig. 5), which went to press in 2006, and was published in 2007. There Tuthmosis III comes to the throne in 1479 B.C., Tuthmosis II is given a reign of three years (1482–1479 B.C.) and phase D/1.2 begins in ca. 1530 B.C. If Ahмосe (on this dating, 1541–1516 B.C.) conquered Avaris sometime between his years 18 and 20 (1523/1521 B.C.) then phase D/1.2 covers the end of the reign of Khamudi, the last five to seven years of Ahмосe and continues into the reign of Amenophis I (1516–1495 B.C.). It is deemed to end just before 1500 B.C., and thus lasts for approximately 30 years, in common with most of the Tell el-Dab^a phases. Phase D/1.1 extends from just before 1500 B.C. and continues to the beginning of the reign of Tuthmosis III in 1479 B.C., and thus covers the remainder of the reign of Amenophis I, the reign of Tuthmosis I (1495–1482 B.C.) and the three year reign of Tuthmosis II (1482–1489 B.C.), ending with the accession of Tuthmosis III in 1479 B.C. phase D/1.1 is then just over 20 years long. However, if the 1530 B.C. date for the beginning of phase D/1.2 was intended to mark the conquest of Avaris by Ahмосe this can easily be accommodated by giving Tuthmosis II a reign of 13 years and making the necessary adjustments. Phase D/1.2 would then cover the last five to seven years of Ahмосe (now 1533/1531–1526 B.C.), and the reign of Amenophis I (1526–1505 B.C.), thus lasting for around 26–28 years. Phase D/1.1 would then cover the reigns of Tuthmosis I (1505–1492 B.C.) and Tuthmosis II (1492–1479 B.C.), and would again last 26 years.

In his co-authored article, »The Chronology of Tell el-Dab^a: A Crucial Meeting Point of 14C dating, Archaeology and Egyptology in the Second Millennium B.C.«, published in Radiocar-

¹⁰³ Aston 2007, 207–248.

bon 54, 2012, page 410, Bietak has amended this chart, and although there dated 2011, (which is reproduced above as chart 2), it is the same as that dated 2008 in his earlier written, but later published, article, »Antagonisms in Historical and Radiocarbon Chronology«, in: A. J. Shortland – C. Bronk Ramsey (eds.), *Radiocarbon and the Chronologies of Ancient Egypt* (Oxford 2013) 79. Here phase D/1 is not divided, but phase D/1(.2) also begins in ca. 1530 B.C., although Tuthmosis II still has a short reign of three years, and phase D/1(.1) ends with the beginning of the reign of Tuthmosis I in 1505 B.C. (which implies a 13 year reign for Tuthmosis II). Phase C/3 extends from the beginning of the reign of Tuthmosis I into the reign of Tuthmosis III going down to around 1460 B.C. Together then phases D/1.1 and phases D/1.2 cover approximately 25 years making each phase very short, covering only 12–13 years each. Phase C/3 then covers the reigns of Tuthmosis I (1505–1492 B.C.), Tuthmosis II (1492–1479 B.C.), and the first 19 years of the reign of Tuthmosis III (1479–1460 B.C.). Phase C/2 then covers the remainder of the reign of Tuthmosis III and extends into the reign of Amenophis II, and is thus a minimum 35 years long comprising the remainder of the reign of Tuthmosis III (1460–1425 B.C.) plus whatever years of Amenophis II are deemed to belong to this phase.

Returning to the above tables showing the different wares and imports in each of the Memphis levels and Tell el-Dab^ca phases, it can be seen that bowls with black rims occur at Memphis in RAT 305 and 365 correlated with the reigns of Ahmose-Amenophis I, and also in RAT 740, of the same date, or slightly earlier. Black rim decoration is also found at Tell el-Dab^ca. In area H/VI most of the vessels with such decoration occur in phase C/2, although examples are also found in phases C/3 and D1/1, but in these phases they are not so common. There is no doubt that the use of black rim decoration was very popular during the reign of Tuthmosis III, but what is not clear is when this style first began.

The presence of black rims on pottery as a decorative style is traditionally assumed to have developed at the end of the Second Intermediate Period¹⁰⁴, a factor which can be traced back to the bowl, itself very similar to examples from ^cEzbet Helmi phase C/3, found with the intact burial discovered by Flinders Petrie at Qurneh, which on the basis of a rishi coffin, was dated by him to the 17th Dynasty since 17th Dynasty royal coffins are of similar style¹⁰⁵. This 17th Dynasty date for the coffin has been »proved« by Gianluca Miniaci in his recent analysis of rishi coffins¹⁰⁶, whilst in the most recent discussions of this group by Janine Bourriau¹⁰⁷, Katherine Eremin et al.¹⁰⁸ and Catherine Roehrig¹⁰⁹, a 17th Dynasty date for the burial is accepted. A bowl with a black rim was found in Gurob tomb 26 together with a scarab of Amenophis I, which thus acts as a *terminus post quem*, hence, as Irmgard Hein has already stated, it is possible that the black rims found in Tell el-Dab^ca phase C/3 could indeed predate the reign of Tuthmosis III¹¹⁰.

Above mention has been made to pottery »traditionally assigned to the reign of Tuthmosis III« and such pottery is abundant at Tell el-Dab^ca in phase C/3, and more so in phase C/2, but the pottery from the reigns of Ahmose – Tuthmosis II is notoriously difficult to define, owing to the lack of well-dated/well published contexts from this period, so it is not certain when this »traditional Tuthmosis III« pottery first developed. If the dates appended to the Memphis material by Janine Bourriau are correct, which themselves rely to a large extent on the disputed first appearances of Base Ring I, and Red Lustrous wares, then this particular pottery phase could indeed have begun nearer the beginning of the 18th Dynasty. This finds some support in the material from Tundaba, a 17th Dynasty establishment situated approximately half way between the northern Thebiad and

¹⁰⁴ Bourriau 1981a, 74; Aston 2003, 142.

¹⁰⁵ Petrie 1909, 6–10.

¹⁰⁶ Miniaci 2011, 141 type C. However, if the coffin were reused, then the burial could be later in time.

¹⁰⁷ Bourriau 1981b, 35.

¹⁰⁸ Eremin et al. 2000, 32–40.

¹⁰⁹ Roehrig 2005, 15–16.

¹¹⁰ Hein 1994b, 247 cat. 319; Hein 2001a, 139.

Khargeh oasis probably founded to control the routes between Thebes and Khargeh¹¹¹. Inscriptional evidence, in the form of ostraca and jar sealings, has led the excavator, John Darnell, to suggest that Tundaba fell into disuse in or around the reign of Tuthmosis I¹¹². Little pottery from the site has been published, but what has¹¹³, includes material very similar to that from phase C/3 at Tell el-Dab^ca.

That indeed pottery styles traditionally associated with the reign of Tuthmosis III could have begun as early as the reign of Tuthmosis I now seems evident from the recent full publication of the ceramic material found in Theban Tomb TT 320¹¹⁴, which finds its closest parallels in the material found during the re-clearance of the tomb of the three foreign wives of Tuthmosis III¹¹⁵. However for reasons I have discussed elsewhere, I have suggested that TT 320 is the tomb of Ahmose Nofretari¹¹⁶, who died in year 5/6 of Tuthmosis I¹¹⁷, hence Tuthmosis III style pottery must have been produced already during the reign of Tuthmosis I.

The above digression shows, that from the pottery alone it is impossible to decide whether phase C/3 should a) date solely to the reign of Tuthmosis III, in accordance with Bietak's 2006 position; b) entirely predate the reign of Tuthmosis III; or c) predate, and continue into the reign of Tuthmosis III, as in Bietak's 2008 position, since all scenarios are possible.

How long is the Hyksos Period?

The Hyksos Period is, based on the Turin Royal Canon, traditionally assumed to have lasted 108 years. However, the relevant fragment of the Turin Royal Canon (col. 10/29), is not so well preserved for the reading 108 to be unequivocal, and both Kim Ryholt and Thomas Schneider, this volume, suggest new readings of the total summation, somewhat higher than the traditional 108 years.

Ryholt reads it as $140 + x$ (i.e. up to 149) years¹¹⁸, and, if this is indeed the case then a further $32 + x$ (up to 41) Hyksos years have to be added to the Tell el-Dab^ca chronology. There are three ways of accounting for this: 1) the Hyksos Period began one phase earlier in time, 2) the Hyksos Period continued one phase longer, or 3) the Hyksos Period Tell el-Dab^ca phases are longer than 30 years duration. If, in scenario 1, the Hyksos Period began 30 years earlier, then the Hyksos would have come to power during the middle of phase E/3, and indeed this would pull the Hyksos kings down nearer to the family group of Neferhotep I, Sihathor and Sobekhotep IV. However, if that were the case one would have to assume that the Hyksos left no traces of any influence on the Tell el-Dab^ca material culture until some 30 years later since, as pointed out above, a radical change in material culture is first noticeable only in phase E/2. If the Hyksos Period lasted 30 years longer, and the Tell el-Dab^ca phases remain at 30 years duration then the end of the Hyksos Period would not be co-eval with the end of phase D/2 but would occur at the end of phase D/1.2. Certainly in terms of material culture phase D/1.2 is indistinguishable from phase D/2, which might suggest that phase D/1.2 is also Hyksos, although it could possibly also be explained by the fact that the ›Hyksos‹ craftsmen were simply producing what they knew, albeit for new masters¹¹⁹; and

¹¹¹ Darnell 2002b, 147.

¹¹² Darnell 2013, 257.

¹¹³ Darnell 2002a, 170 fig 9; Darnell 2013, 253–255 figs. 33–36.

¹¹⁴ Senoussi 2010, 189–201, pls. C01–C10.

¹¹⁵ Lilyquist 2003, 91–103.

¹¹⁶ Aston 2013, 7–20; Aston 2015, 15–42.

¹¹⁷ Bradbury 1985, 73–83.

¹¹⁸ Although Kim Ryholt only publishes this idea in this volume, his views on this go back to 2005, in an unpublished paper, ›Problems in the Chronology of the Second Intermediate Period‹, and have been quoted by Wiener 2006, 327, and Bennett 2006, 240. It was also cited as an editors' note by E. Hornung in: Hornung et al. 2006, 194 n. 126.

¹¹⁹ Cf. Hein 2001a, 138.

a similar explanation could also be postulated for the apparent 13th Dynasty flavour to the material culture of the later part of phase E/3 and the first half of phase E/2 if >13th Dynasty< craftsmen continued to produce what they knew under the early Hyksos rulers. Phase D/1.2 also marks a difference in orientation of the settlement from the underlying D/2 in that, in area H/III, a Hyksos palatial building seems to have been overbuilt by a number of silos¹²⁰, evidently used in the stockpiling of grain. Whilst this may indicate a change due to an incoming population in the wake of Ahmose's conquest, there is nothing to positively overrule that these silos and stockpiling of grain were not created under the latest Hyksos kings in preparation for a coming siege. The final possibility would envisage adding 30 years to the period covered by the middle of phases E/2, E/1, D/3 and D/2, which could be accommodated by adding approximately 10 years to each of the phases E/1, D/3 and D/2. This presumably is the view envisaged by Malcolm Wiener when he suggests that adding 32 years to the Hyksos Period »would affect only slightly the absolute dates of the various strata at Dab^ca and of the Cypriote pottery they contained«.¹²¹

More recently Schneider, this volume, has proposed readings of between 160 (–169) or 180 (–189) years, scenarios which would mean adding a further 52 + x (up to 61) or 72 + x (up to 81) Hyksos years to the Tell el-Dab^ca chronology. This could only be accommodated by placing both phases D/1.2 and D/1.1 into the Hyksos Period, or by making each of the phases E/1, D/3 and D/2 considerably longer, of around 47/50 to 54/57 years duration.

Differing schemes (models) for the dating of Khyan

The above discussions of the problems in the conventional chronologies, Cypriot and Egyptian pottery, and the lengths of reign of Tuthmosis II and the Hyksos Period enables one to draw up a series of schemes or models which affect the dating of Khyan. Since I am only concerned with the earliest and the latest possibilities, in the following I will only consider the Low (Tuthmosis III coming to the throne in 1479 B.C.) and (Ultra-)High chronologies (Tuthmosis III coming to the throne in 1504 B.C.). Readers who would prefer a Middle chronology with Tuthmosis III coming to the throne in 1493 B.C. would simply need to make all the absolute dates given in the following scenarios (i) – (p) eleven years later.

So what are the possible schemes?

- **(a)** *The Low chronology is correct, Base Ring I ware did not appear before the reign of Tuthmosis III, Tuthmosis II ruled for only three years, and the Hyksos Period lasted 108 years.*

Taken together, then phase C/3 has to begin no earlier than the reign of Tuthmosis III, which in real terms would be no earlier than 1479 B.C., and in the latest published chart, this phase begins around 1500 B.C. and thus also includes the reigns of Tuthmosis II (1479–1482 B.C.), the reign of Tuthmosis I (1482–1495 B.C.) and the last five years of the reign of Amenophis I (1495–1500 B.C.). Phase D/1.1 would then extend from approximately 1500–1510 B.C., and cover the middle years of the reign of Amenophis I. phase D/1.2 would extend from 1510 B.C. back to the conquest of Avaris, and cover the first two years of Amenophis I (1509–1515 B.C.) and the last five to seven years of Ahmose (1516–1521/1523), if he indeed conquered Avaris sometime between years 18 and 20 of his reign, and the 18th Dynasty would have begun in ca. 1540 B.C. phase D/2 would then date to around 1520–1550 B.C., D/3 to around 1550–1580 B.C. and E/1 to 1580–1610 B.C. In this scenario, Khyan, on the border of phases E/1 and D/3 must have flourished at around 1580 B.C., and this is the latest he can be.

¹²⁰ Bietak et al. 2002, 60–61.

¹²¹ Wiener 2006, 327.

Beginning of Phase C/3	1500 B.C.	
Phase D/1.1	1510–1500 B.C.	
Phase D/1.2	1520–1510 B.C.	
		(Start New Kingdom 1540 B.C.)
Phase D/2	1550–1520 B.C.	
Phase D/3	1580–1550 B.C.	
		(Floruit Khyan – 1580 B.C.)
Phase E/1	1610–1580 B.C.	

Whilst this dating has the advantages that the Tuthmosis III astronomical dates are perfect, and the different alignment of the settlement in phase D/1.2 can be explained by the Theban conquest, it does create a few problems. The most famous of these is the oft-mentioned Carbon 14 offset¹²².

A series of 47 C14 samples, undertaken on short-lived seeds from the site of Tell el-Dab^a, has produced a sequenced set of dates for each of the archaeological phases into which the site is divided¹²³. They can be tabulated as follows (no of samples in brackets)¹²⁴, and placed in juxtaposition to the scheme (a) archaeological dates:

Archaeological dates		C14 date		Minimum offset
(Scheme a)		(2 sigma range)		
Phase C/2	1460–1420 B.C.	Phase C/2 (1)	1667–1537 B.C.	77 years
		Border Phase C/3 – C/2 (4)	1668–1543 B.C.	
Phase C/3	1500–1460 B.C.			
Phase D/1.1	1510–1500 B.C.	Phase D/1 (1)	1668–1601 B.C.	80 years
Phase D/1.2	1523/1521–1510 B.C.			
Phase D/2	1550–1520 B.C.	Phase D/2 (9)	1723–1630 B.C.	80 years
		Border Phase D/3 – D/2 (1)	1731–1656 B.C.	
Phase D/3	1580–1550 B.C.	Phase D/3 (6)	1745–1673 B.C.	93 years
Phase E/1	1610–1580 B.C.	Phase E/1 (6)	1759–1693 B.C.	83 years
Phase E/2	1640–1610 B.C.	Phase E/2 (1)	1781–1702 B.C.	62 years
Phase E/3	1670–1640 B.C.	Phase E/3 (1)	1846–1747 B.C.	77 years
		Border Phase F – E/3 (1)	1863–1755 B.C.	
Phase F	1700–1670 B.C.	Phase F (2)	1871–1767 B.C.	67 years
Phase G/1–3	1740–1700 B.C.	Phase G/1–3 (4)	1887–1802 B.C.	62 years

These C14 results are in a proper sequence hence it is unlikely that any of them have been attributed to the wrong level, yet when plotted against the suggested dates in real time given to these levels they tend to be an average of 120 years too early (cf. chart 4). Either, therefore, there is some unexplained anomaly in the C14 method, or there is something wrong with the established Egyptian chronology. The C14 samples were run by laboratories in both Oxford and Vienna, and came to approximately the same results, hence any laboratory error can be discounted. Specific attempts to determine whether Egypt's individual climatic conditions would result in an offset,

¹²² Cf. Bietak 2003; Bietak 2013; Kutschera et al. 2012; Höflmayer 2012; Höflmayer 2015; Manning 2014; Manning et al. 2014.

¹²³ Kutschera et al. 2012; Bietak 2013.

¹²⁴ Kutschera et al. 2012, 412–413.

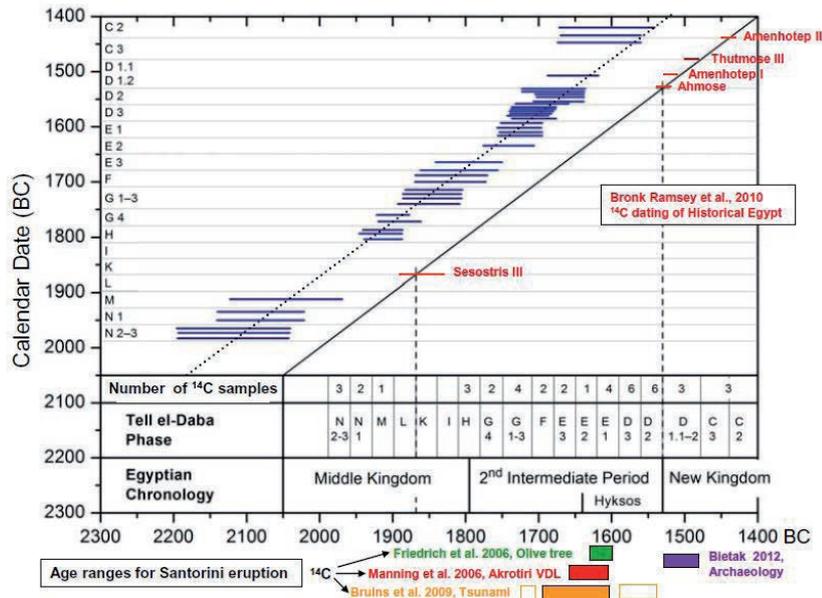


Chart 4 Comparison of the sequenced C14 results (95,4 % probability ranges) with the Tell el-Dab'a phases. The dotted line shows the average C14 ages for the Tell el-Dab'a phases, and the solid line the Scheme dates, clearly showing that the two are an average of 120 years apart. Also shown are the Bronk Ramsey et al. 2010 C14 ages for the named kings (after Kutschera et al. 2012, 418 fig. 7)

were undertaken on modern samples, with the result that there could, indeed, be an offset of 16–22 years; however this only exacerbates the problem since this offset is in the opposite direction, i.e. the samples were actually known to be older than the resulting C14 dates¹²⁵. Thus if this modern offset was also current during Pharaonic times, then the Tell el-Dab'a levels would be even older than the presumed C14 dates.

That the C14 dates might indeed be wrong, finds some support in recent work at Assiros in northern Greece, where the C14 dates from the early Proto-Geometric down to the Late Hellenic IIIA2 levels are again consistently 70–100 years too early for the expected conventional (archaeological) dating¹²⁶.

Less well known is the series of burials of young men – most probably soldiers – which were attributed to stratum D/1.1. At first, (2001) it was thought that these may have been associated with a battle for Avaris, particularly as some showed signs of injury¹²⁷, but, if true, then this would mean that stratum C/3 would date to the beginning of the New Kingdom, some considerable time before the reign of Tuthmosis III. Consequently this explanation was later dismissed as unlikely on stratigraphic grounds, with the suggestion that they were the burials of Nubian recruits from early 18th Dynasty prisoners of war¹²⁸.

In scheme (a) it is also clear that phases D/1.1 and D/1.2 are very short, covering only twenty years between them.

Additionally in scheme (a) Tuthmosis IV was in contact with a king who was already dead, unless, of course, the Babylonian chronology is wrong.

¹²⁵ Dee et al. 2010, 687–693; Dee 2013, 53–64.

¹²⁶ Wardle et al. 2014, 1–9.

¹²⁷ Bietak et al. 2001b, 67–71.

¹²⁸ Bietak et al. 2007, 19. However an examination of the skeletal remains by the anthropologist Julia Gresky indicates that they are not Nubians. I. Forstner-Müller, personal communication.

- **(b)** *The Low chronology is correct, Base Ring I ware did not appear before the reign of Tuthmosis III, Tuthmosis II ruled for thirteen years, and the Hyksos Period lasted 108 years.*

This is similar to scheme (a), the only difference being that all the phases earlier than phase C/3 would begin ten years earlier.

Beginning of Phase C/3	1500 B.C.	
Phase D/1.1	1510–1500 B.C.	
Phase D/1.2	1530–1510 B.C.	
		(Start New Kingdom 1550 B.C.)
Phase D/2	1560–1530 B.C.	
Phase D/3	1590–1560 B.C.	
		(Floruit Khyan – 1590 B.C.)
Phase E/1	1620–1590 B.C.	

In this scenario, then Khyan, on the border of phases E/1 and D/3 must have flourished at around 1590 B.C., and this is, essentially, the position given in the latest published chronological chart for Tell el-Dab^a (cf. above chart 2). This scenario has the same advantages and disadvantages as scheme (a) except that we are now ten years earlier in time, and (b) phases D/1.1 and D/1.2 together last for 26–30 years.

- **(c)** *The Low chronology is correct, Base Ring I ware did not appear before the reign of Tuthmosis III, Tuthmosis II ruled for only three years, and the Hyksos Period lasted 140 (–149) years.*

With the Hyksos Period lasting for 140 (–149) and not 108 years, then two scenarios unfold depending on whether phases E/1, D/3 and D/2 each lasted for approximately 40 years each (scenario c1), or whether phase D/1.2 should be placed in the Hyksos Period (scenario c2).

- **(c1)** This scenario has the same advantages and disadvantages as possibility/model (a), except that we are now 20 years earlier in time.

Beginning of Phase C/3	1500 B.C.	
Phase D/1.1	1510–1500 B.C.	
Phase D/1.2	1520–1510 B.C.	
		(Start New Kingdom 1540 B.C.)
Phase D/2	1560–1520 B.C.	
Phase D/3	1600–1560 B.C.	
		(Floruit Khyan – 1600 B.C.)
Phase E/1	1640–1600 B.C.	

- **(c2)**

Beginning of Phase C/3	1500 B.C.	
Phase D/1.1	1520–1500 B.C.	
		(Start New Kingdom 1540 B.C.)
Phase D/1.2	1550–1520 B.C.	
Phase D/2	1580–1550 B.C.	
Phase D/3	1610–1580 B.C.	
		(Floruit Khyan – 1610 B.C.)
Phase E/1	1650–1610 B.C.	

- **(d)** *The Low chronology is correct, Base Ring I ware did not appear before the reign of Tuthmosis III, Tuthmosis II ruled for thirteen years, and the Hyksos Period lasted 140 (–149) years.*

With the Hyksos Period lasting for 140 and not 108 years, then two scenarios unfold depending on whether phases E/1, D/3 and D/2 each lasted for approximately 40 years each (scenario d1), or whether phase D/1.2 should be placed in the Hyksos Period (scenario d2).

- **(d1)**

Beginning of Phase C/3	1500 B.C.	
Phase D/1.1	1515–1500 B.C.	
Phase D/1.2	1530–1515 B.C.	
		(Start New Kingdom 1550 B.C.)
Phase D/2	1570–1530 B.C.	
Phase D/3	1610–1570 B.C.	
		(Floruit Khyan – 1610 B.C.)
Phase E/1	1650–1610 B.C.	

- **(d2)**

Beginning of Phase C/3	1500 B.C.	
Phase D/1.1	1530–1500 B.C.	
		(Start New Kingdom 1550 B.C.)
Phase D/1.2	1560–1530 B.C.	
Phase D/2	1590–1560 B.C.	
Phase D/3	1620–1590 B.C.	
		(Floruit Khyan – 1620 B.C.)
Phase E/1	1660–1620 B.C.	

- **(e)** *The Low chronology is correct, Base Ring I ware did not appear before the reign of Tuthmosis III, Tuthmosis II ruled for only three years, and the Hyksos Period lasted 160 (–169) years.*

With the Hyksos Period lasting for 160 (–169) and not 108 years, then two scenarios unfold depending on whether phases E/1, D/3 and D/2 each lasted for approximately 50 years each (scenario e1), or whether phases D/1.2 and D/1.1 should both be placed in the Hyksos Period (scenario e2), with the phases E/1 to D/1.1 covering 150 years.

- **(e1)**

Beginning of Phase C/3	1500 B.C.	
Phase D/1.1	1510–1500 B.C.	
Phase D/1.2	1520–1510 B.C.	
		(Start New Kingdom 1540 B.C.)
Phase D/2	1570–1520 B.C.	
Phase D/3	1620–1570 B.C.	
		(Floruit Khyan – 1620 B.C.)
Phase E/1	1670–1620 B.C.	

- **(e2)**

Beginning of Phase C/3	1520 B.C.	
		(Start New Kingdom 1540 B.C.)
Phase D/1.1	1550–1520 B.C.	
Phase D/1.2	1580–1550 B.C.	
Phase D/2	1610–1580 B.C.	
Phase D/3	1640–1610 B.C.	
		(Floruit Khyan – 1640 B.C.)
Phase E/1	1670–1640 B.C.	

- **(f)** *The Low chronology is correct, Base Ring I ware did not appear before the reign of Tuthmosis III, Tuthmosis II ruled for 13 years, and the Hyksos Period lasted 180 (–189) years.*

With the Hyksos Period lasting for 180 and not 108 years, then two scenarios unfold depending on whether phases E/1, D/3 and D/2 each lasted for approximately 60 years each (scenario f1), or whether phases D/1.1 and D/1.2 should be placed in the Hyksos Period (scenario f2).

- **(f1)**

Beginning of Phase C/3	1500 B.C.	
Phase D/1.1	1510–1500 B.C.	
Phase D/1.2	1520–1510 B.C.	
		(Start New Kingdom 1540 B.C.)
Phase D/2	1580–1520 B.C.	
Phase D/3	1640–1580 B.C.	
		(Floruit Khyan – 1640 B.C.)
Phase E/1	1700–1640 B.C.	

- **(f2)**

Beginning of Phase C/3	1520 B.C.	
		(Start New Kingdom 1540 B.C.)
Phase D/1.1	1555–1520 B.C.	
Phase D/1.2	1590–1555 B.C.	
Phase D/2	1625–1590 B.C.	
Phase D/3	1660–1625 B.C.	
		(Floruit Khyan – 1660 B.C.)
Phase E/1	1695–1660 B.C.	

- **(g)** *The Low chronology is correct but Base Ring I ware appeared at the beginning of the New Kingdom, Tuthmosis II ruled for only three years and the Hyksos Period lasted 108 years.*

If Base Ring I ware first appeared at the beginning of the New Kingdom, and not with the beginning of the reign of Tuthmosis III, then the presence of Base Ring I ware could indicate that the conquest of Avaris took place at the end of phase D/1.1. Then phase C/3 has to begin no earlier than years 18/20 of Ahmose which would then fall in 1516–1521/1523 B.C. phase D/1.1 would extend from ca. 1520–1550 B.C., phase D/1.2 would then date to around 1550–1580 B.C., D/2 to around 1580–1610 B.C., D/3 to 1610–1640 B.C. and E/1 to around 1640–1670 B.C. In this scenario, then Khyan, on the border of phases E/1 and D/3 must have flourished at around 1640 B.C. This scenario has the same advantages and disadvantages as scheme (a), with two

major differences, one further disadvantage and one advantage. The extra disadvantage is that the Hyksos Period is too long, since from the middle of phase E/2 to the end of D/1.1 is ca. 165 years. One could perhaps assume that phase D/1.1 was brought to a premature end by Ahmose's conquest, and that the Hyksos Period began more towards the end of phase E/2, but even then it is unlikely that 57 years could be removed in this way. The added advantage, however, is that the burials at the end of phase D/1.1 could indeed be associated with the fall of Avaris. This scenario also implies that phase C/3 must be a long one since if it continued into the reign of Tuthmosis III, then it must cover the last five to seven years of Ahmose, the reigns of Amenophis I (21 years), Tuthmosis I (13 years) and Tuthmosis II (3 years) before extending into the early years of Tuthmosis III, making a total of 42+ years. An extension of one Tell el-Dab^a phase is, however, perhaps not inconceivable, and a 40 year length for some of the Tell el-Dab^a phases is postulated on the latest published chronological charts, most notably phases G/1–3, C/3 and C/2.

Beginning of Phase C/3	1520 B.C.	
		(Start New Kingdom 1540 B.C.)
Phase D/1.1	1550–1520 B.C.	
Phase D/1.2	1580–1550 B.C.	
Phase D/2	1610–1580 B.C.	
Phase D/3	1640–1610 B.C.	
		(Floruit Khyan – 1640 B.C.)
Phase E/1	1670–1640 B.C.	

- **(h)** *The Low chronology is correct but Base Ring I appeared at the beginning of the New Kingdom, Tuthmosis II ruled for thirteen years and the Hyksos Period lasted 108 years.*

This scheme is similar to the previous one, except that all phases would begin 10 years earlier. This scenario has the same advantages and disadvantages as scheme (g). However in contrast to scheme (g), phase C/3 would be another 10 years longer since if it continued into the reign of Tuthmosis III, then it must cover the last five to seven years of Ahmose, the reigns of Amenophis I (21 years), Tuthmosis I (13 years), Tuthmosis II (13 years) and the early years of Tuthmosis III, making a total of 52+ years. Since scarab evidence indicates that phase C/2 extends into the reign of Amenophis II, phase C/2 would then cover the rest of the reign of Tuthmosis III and extend into the reign of Amenophis II, implying that this, too, is a long phase. This is corroborated by the occurrence of Base Ring II ware if Kathryn Eriksson is right in her suggestion that Base Ring II is only found from the reigns of Amenophis II and Tuthmosis IV onwards¹²⁹. In contrast to the earlier phases at Tell el-Dab^a, this is possibly to be explained by the fact that both these phases are known entirely from excavations in the Tuthmosid palace area, and it is possible that such monumental buildings remained in use for longer periods than structures in more normal settlement areas, in much the same way as medieval cathedrals which were certainly in use for much longer periods than the town houses which surround them.

Beginning of Phase C/3	1530 B.C.	
		(Start New Kingdom 1550 B.C.)
Phase D/1.1	1560–1530 B.C.	
Phase D/1.2	1590–1560 B.C.	
Phase D/2	1620–1590 B.C.	
Phase D/3	1650–1620 B.C.	
		(Floruit Khyan – 1650 B.C.)
Phase E/1	1680–1650 B.C.	

¹²⁹ Eriksson 2001, 65.

- **(i)** *The Low chronology is correct but Base Ring I appeared at the beginning of the New Kingdom, Tuthmosis II ruled for only three years, and the Hyksos Period lasted 140 (–149) years.*

In effect this is the same as scheme (g), but with the proviso that with the Hyksos Period lasting from the middle of phase E/2 to the end of phase D/1.1 being 165 years, then the Hyksos Period is only 16 to 25 years too long, a number which could easily be accommodated by slight adjustments to the lengths of any or all of the phases from E/2 to D/1.1.

Beginning of Phase C/3	1520 B.C.	
		(Start New Kingdom 1540 B.C.)
Phase D/1.1	1550–1520 B.C.	
Phase D/1.2	1580–1550 B.C.	
Phase D/2	1610–1580 B.C.	
Phase D/3	1640–1610 B.C.	
		(Floruit Khyan – 1640 B.C.)
Phase E/1	1670–1640 B.C.	

- **(j)** *The Low chronology is correct but Base Ring I ware appeared at the beginning of the New Kingdom, Tuthmosis II ruled for 13 years and the Hyksos Period lasted 140 (–149) years.*

In effect this is the same as scheme (i), but with the proviso that the New Kingdom would begin 10 years earlier.

Beginning of Phase C/3	1530 B.C.	
		(Start New Kingdom 1550 B.C.)
Phase D/1.1	1560–1530 B.C.	
Phase D/1.2	1590–1560 B.C.	
Phase D/2	1620–1590 B.C.	
Phase D/3	1650–1620 B.C.	
		(Floruit Khyan – 1650 B.C.)
Phase E/1	1680–1650 B.C.	

- **(k)** *The Low chronology is correct but Base Ring I ware appeared at the beginning of the New Kingdom, Tuthmosis II ruled for three years and the Hyksos Period lasted 160 (–169) years.*

In effect this is the same as scheme (h), but with the proviso that the Hyksos Period lasting from the middle of phase E/2 to the end of phase D/1.1 being 165 years would fit perfectly.

Beginning of Phase C/3	1520 B.C.	
		(Start New Kingdom 1540 B.C.)
Phase D/1.1	1550–1520 B.C.	
Phase D/1.2	1580–1550 B.C.	
Phase D/2	1610–1580 B.C.	
Phase D/3	1640–1610 B.C.	
		(Floruit Khyan – 1640 B.C.)
Phase E/1	1670–1640 B.C.	

- **(l)** *The Low chronology is correct but Base Ring I ware appeared at the beginning of the New Kingdom, Tuthmosis II ruled for 13 years and the Hyksos Period lasted 160 (–169) years.*

In effect this is the same as scheme (j), but with the proviso that the Hyksos Period lasting from the middle of phase E/2 to the end of phase D/1.1 being 165 years would fit perfectly.

Beginning of Phase C/3	1530 B.C.	
		(Start New Kingdom 1550 B.C.)
Phase D/1.1	1560–1530 B.C.	
Phase D/1.2	1590–1560 B.C.	
Phase D/2	1620–1590 B.C.	
Phase D/3	1650–1620 B.C.	
		(Floruit Khyan – 1650)
Phase E/1	1680–1650 B.C.	

- **(m)** *The High chronology is correct, Base Ring I ware did not appear before the reign of Tuthmosis III, Tuthmosis II ruled for only three years, and the Hyksos Period lasted 108 years.*

In this case phase C/3 has to begin no earlier than the reign of Tuthmosis III, which in real terms would be no earlier than 1504 B.C. phase D/1.1 would then extend from approximately 1534–1504 B.C., and cover the reigns of Tuthmosis II (3 years 1507–1504 B.C.), Tuthmosis I (13 years, 1520–1507 B.C.) and the last 14 years of Amenophis I (1534–1520 B.C.). Phase D/1.2 would extend from 1534 back to the conquest of Avaris, and cover the first seven years of Amenophis I (1541–1534 B.C.) and the last five to seven years of Ahmose, if he indeed conquered Avaris sometime between years 18 and 20 of his reign (1548/1546–1541 B.C.). Phase D/2 would then date to around 1580–1550 B.C., D/3 to around 1610–1580 B.C. and E/1 to 1640–1610 B.C. In this scenario, then Khyan, around the transition from phases E/1 and D/3 must have flourished at around 1610 B.C. Scheme (m) has the same problems as scheme (a) with Carbon 14, and also, it loses the advantage of the lunar dates being absolutely perfect. It does, however, gain the advantage that Tuthmosis IV comes to the throne before 1400 B.C.

Beginning of Phase C/3	1500 B.C.	
Phase D/1.1	1530–1500 B.C.	
Phase D/1.2	1550–1530 B.C.	
		(Start New Kingdom 1566 B.C.)
Phase D/2	1580–1550 B.C.	
Phase D/3	1610–1580 B.C.	
		(Floruit Khyan – 1610 B.C.)
Phase E/1	1640–1610 B.C.	

- **(n)** *The (Ultra-)High chronology is correct, Base Ring I ware did not appear before the reign of Tuthmosis III, Tuthmosis II ruled for 13 years and the Hyksos Period lasted 108 years.*

Phase C/3 has to begin no earlier than the reign of Tuthmosis III, which in real terms would be no earlier than 1504 B.C. phase D/1.1 would then extend from approximately 1534–1504 B.C., and cover the reigns of Tuthmosis II (13 years 1517–1504 B.C.), Tuthmosis I (13 years, 1530–1517 B.C.) and the last four years of Amenophis I (1534–1530 B.C.). Phase D/1.2 would extend from 1534 B.C. back to the conquest of Avaris, and cover the first 17 years of Amenophis I (1551–1534 B.C.) and the last five to seven years of Ahmose, if he indeed conquered Avaris sometime between years 18 and 20 of his reign (1558/1556–1551 B.C.), and the 18th Dynasty

would have begun in ca. 1576 B.C. Scheme (n) has the same advantages and disadvantages as scheme (m); the only difference being that Khyan is 10 years earlier in time.

Beginning of Phase C/3	1500 B.C.	
Phase D/1.1	1530–1500 B.C.	
Phase D/1.2	1560–1530 B.C.	
		(Start New Kingdom 1576 B.C.)
Phase D/2	1590–1560 B.C.	
Phase D/3	1620–1590 B.C.	
		(Floruit Khyan – 1620 B.C.)
Phase E/1	1650–1620 B.C.	

- **(o)** *The High chronology is correct, Base Ring I ware did not appear before the reign of Tuthmosis III, Tuthmosis II ruled for only three years and the Hyksos Period lasted 140 (–149) years.*

If the Hyksos Period lasted for 140 (–149) and not 108 years, then two scenarios unfold depending on whether phases E/1, D/3 and D/2 each lasted for approximately 40 years each (scenario o1), or whether phase D/1.2 should be placed in the Hyksos Period (scenario o2).

- **(o1)**

Beginning of Phase C/3	1500 B.C.	
Phase D/1.1	1530–1500 B.C.	
Phase D/1.2	1550–1530 B.C.	
		(Start New Kingdom 1566 B.C.)
Phase D/2	1590–1550 B.C.	
Phase D/3	1630–1590 B.C.	
		(Floruit Khyan – 1630 B.C.)
Phase E/1	1670–1630 B.C.	

This scenario has the same advantages and disadvantages as scheme (c1) except that we are now 20 years earlier in time.

- **(o2)** Phase C/3 has to begin no earlier than the reign of Tuthmosis III, which in real terms would be no earlier than 1504 B.C. Phase D/1.1 would then extend from 1504 B.C. down to the end of the Hyksos Period, which would have happened with Ahmose's conquest sometime between his years 18–20. In this case phase D/1.1 would have to cover the reigns of Tuthmosis II (3 years 1507–1504 B.C.), Tuthmosis I (13 years, 1520–1507 B.C.) Amenophis I (21 years 1541–1520 B.C.) and the last five to seven years of Ahmose (1548/1546–1541 B.C.), and would have thus lasted for 44–46 years. This scenario has the same advantages and disadvantages as scheme (a), with the major difference that phase D/1.1 would also be a longer phase.

Beginning of Phase C/3	1500 B.C.	
Phase D/1.1	1550–1500 B.C.	
		(Start New Kingdom 1530 B.C.)
Phase D/1.2	1580–1550 B.C.	
Phase D/2	1610–1580 B.C.	
Phase D/3	1640–1610 B.C.	
		(Floruit Khyan – 1640 B.C.)
Phase E/1	1670–1640 B.C.	

- **(p)** *The (Ultra-)High chronology is correct, Base Ring I ware did not appear before the reign of Tuthmosis III, Tuthmosis II ruled for 13 years, and the Hyksos Period lasted 140 (–149) years.*

If the Hyksos Period lasted for 140 (–149) and not 108 years, then two scenarios unfold depending on whether phases E/1, D/3 and D/2 each lasted for approximately 40 years each (scenario p1), or whether phase D/1.2 should be placed in the Hyksos Period (scenario p2).

- **(p1)** This scenario has the same advantages and disadvantages as scheme (n), except that we are now 30 years earlier in time.

Beginning of Phase C/3	1500 B.C.	
Phase D/1.1	1530–1500 B.C.	
Phase D/1.2	1560–1530 B.C.	
		(Start New Kingdom 1576 B.C.)
Phase D/2	1600–1560 B.C.	
Phase D/3	1640–1600 B.C.	
		(Floruit Khyan – 1640 B.C.)
Phase E/1	1680–1640 B.C.	

- **(p2)** Phase C/3 has to begin no earlier than the reign of Tuthmosis III, which in real terms would be no earlier than 1504 B.C. Phase D/1.1 would then extend from 1504 B.C. down to the end of the Hyksos Period, which would have happened with Ahmose's conquest sometime between his years 18–20. In this case phase D/1.1 would have to cover the reigns of Tuthmosis II (13 years 1504–1517 B.C.), Tuthmosis I (13 years, 1517–1530 B.C.), Amenophis I (21 years 1530–1551 B.C.) and the last five to seven years of Ahmose (1551–1556/1558 B.C.), and would have thus lasted for 52–54 years. This scenario has the same advantages and disadvantages as scheme (a), but with the additional disadvantage that phase D/1.1 would have lasted for more than 50 years.

Beginning of Phase C/3	1500 B.C.	
Phase D/1.1	1550–1500 B.C.	
		(Start New Kingdom 1530 B.C.)
Phase D/1.2	1580–1550 B.C.	
Phase D/2	1610–1580 B.C.	
Phase D/3	1640–1610 B.C.	
		(Floruit Khyan – 1640 B.C.)
Phase E/1	1670–1640 B.C.	

- **(q)** *The High chronology is correct but Base Ring I ware appeared at the beginning of the New Kingdom, Tuthmosis II ruled for only three years and the Hyksos Period lasted 108 years.*

If Base Ring I ware first appeared at the beginning of the New Kingdom, and not with the beginning of the reign of Tuthmosis III, then the presence of Base Ring I ware would indicate the beginning of the New Kingdom, with the implication that the conquest of Avaris took place at the end of phase D/1.1. In this case, then phase C/3 has to begin no earlier than years 18/20 of Ahmose which would then fall in 1548–1546 B.C. In this scheme the burials at the end of stratum D/1.1 could be associated with the fall of Avaris, and Tuthmosis IV was already on the throne before 1400 B.C.

Beginning of Phase C/3	1550 B.C.	
		(Start New Kingdom 1566 B.C.)
Phase D/1.1	1580–1550 B.C.	

Phase D/1.2	1610–1580 B.C.	
Phase D/2	1640–1610 B.C.	
Phase D/3	1670–1640 B.C.	
		(Floruit Khyan – 1670 B.C.)
Phase E/1	1700–1670 B.C.	

On the other hand, with the High chronology the lunar dates during the reign of Tuthmosis III are no longer exact, but are off by one day, the change in orientation of the settlement from phase D/2 to phase D/1.2 is not explained, and the Hyksos Period is too long, whilst phases C/3 and C/2 are longer than 30 years. In this scenario, however there is no C14 offset, but this is immaterial as the Hyksos Period would be around 165 years long, rather too much for a period which only lasted 108 years.

- **(r)** *The (Ultra-)High chronology is correct but Base Ring I ware appeared at the beginning of the New Kingdom, Tuthmosis II ruled for 13 years and the Hyksos Period lasted 108 years.*

This is similar to scheme (q) but phase C/3 would begin 10 years earlier in time to accommodate 10 more years of Tuthmosis II's rule.

Beginning of Phase C/3	1560 B.C.	
		(Start New Kingdom 1576 B.C.)
Phase D/1.1	1590–1560 B.C.	
Phase D/1.2	1620–1590 B.C.	
Phase D/2	1650–1620 B.C.	
Phase D/3	1680–1650 B.C.	
		(Floruit Khyan – 1680 B.C.)
Phase E/1	1710–1680 B.C.	

As with scheme (q) the burials at the end of stratum D/1.1 could be associated with the fall of Avaris, and Tuthmosis IV was already on the throne before 1400 B.C. Once again, however with the High chronology the lunar dates during the reign of Tuthmosis III are no longer exact, but are off by one day, and the change in orientation of the settlement from phase D/2 to phase D/1.2 is not explained.

- **(s)** *The High chronology is correct but Base Ring I ware appeared at the beginning of the New Kingdom, Tuthmosis II ruled for only three years and the Hyksos Period lasted 140 (–149) years.*

If Base Ring I ware first appeared at the beginning of the New Kingdom, and not with the beginning of the reign of Tuthmosis III, then the presence of Base Ring I ware would indicate the beginning of the New Kingdom, with the implication that the conquest of Avaris took place at the end of phase D/1.1.

Beginning of Phase C/3	1550 B.C.	
		(Start New Kingdom 1566 B.C.)
Phase D/1.1	1580–1550 B.C.	
Phase D/1.2	1610–1580 B.C.	
Phase D/2	1640–1610 B.C.	
Phase D/3	1670–1640 B.C.	
		(Floruit Khyan – 1670 B.C.)
Phase E/1	1700–1670 B.C.	

In this scenario, the Hyksos Period is only a few years too long which can be accommodated with minor adjustments to the length of any of the phases from phase E/2 to D/1.1. Phase D/1.2 is a reasonable length, the burials at the end of stratum D/1.1 could be associated with the conquest of Avaris and Tuthmosis IV was on the throne before 1400 B.C. Additionally if indeed Base Ring I ware dates phase C/3 to the beginning of the New Kingdom, this would also have a bearing on the White Slip bowl found on Thera, since, assuming, with Manfred Bietak, a maximum time span of approximately 25 years between production and deposition in Tell el-Dab^a¹³⁰, then one could presume that, with scheme (s), White Slip ware began to be produced around 1600 B.C., which is the current presumed date for the Santorini eruption¹³¹.

With this possibility the C14 offset is practically eliminated, since the dates of the archaeological phases overlap with the edges of the two sigma ranges of the C14 results, as can be seen when the dates of scheme (s) are juxtaposed with the C14 dates, and their resulting overlaps:

Archaeological dates		C14 date		Overlap
(Scheme s)		(2 sigma range)		
		Phase C/2 (1)	1667–1537 B.C.	
		Border Phase C/3–C/2 (4)	1668–1543 B.C.	
Phase C/3	1548/46–X			
Phase D/1.1	1580–1548/46 B.C.	Phase D/1 (1)	1668–1601 B.C.	9 years
Phase D/1.2	1610–1580 B.C.			
Phase D/2	1640–1610 B.C.	Phase D/2 (9)	1723–1630 B.C.	10 years
		Border Phase D/3–D/2 (1)	1731–1656 B.C.	
Phase D/3	1670–1640 B.C.	Phase D/3 (6)	1745–1673 B.C.	3 years
Phase E/1	1700–1670 B.C.	Phase E/1 (6)	1759–1693 B.C.	7 years
Phase E/2	1730–1700 B.C.	Phase E/2 (1)	1781–1702 B.C.	28 years
Phase E/3	1760–1730 B.C.	Phase E/3 (1)	1846–1747 B.C.	13 years
		Border Phase F–E/3 (1)	1863–1755 B.C.	
Phase F	1790–1760 B.C.	Phase F (2)	1871–1767 B.C.	23 years
Phase G/1–3	1830–1790 B.C.	Phase G/1–3 (4)	1887–1802 B.C.	28 years

Once again with the High chronology the lunar dates during the reign of Tuthmosis III are no longer exact, but are off by one day, and the change in orientation of the settlement from phase D/2 to phase D/1.2 is not explained. Moreover with the 44/55 + x years occupied by Khamudi and Apophis at the end of the 15th Dynasty, their reigns would now fall into phases D/1.1 and D/1.2 with the result that there would be a long gap between them and Khyan whose reign covers the phase E/1–D/3 border. Nevertheless if the summation of the years of Hyksos rule should be read as 140 (–149) years then it is clear that, on average, each of the seven known Hyksos kings must have reigned for 20–22 years. Based on his monuments it is possible that Khyan had a long reign, and he could conceivably have reigned into the early years of phase D/2, and, if that were the case, and, if we accept, with Thomas Schneider, that two kings, Yanassi and Sikru-Haddu, ruled between Khyan and Apophis, then this gap is not insurmountable.

¹³⁰ Bietak 2003, 27.

¹³¹ Höflmayer 2012, 442.

- **(t)** *The (Ultra-)High chronology is correct but Base Ring I appeared at the beginning of the New Kingdom, Tuthmosis II ruled for 13 years and the Hyksos Period lasted 140 (-149) years.*

Beginning of Phase C/3	1560 B.C.	
		(Start New Kingdom 1576 B.C.)
Phase D/1.1	1590–1560 B.C.	
Phase D/1.2	1620–1590 B.C.	
Phase D/2	1650–1620 B.C.	
Phase D/3	1680–1650 B.C.	
		(Floruit Khyan – 1680 B.C.)
Phase E/1	1710–1680 B.C.	

In this scenario, the Hyksos Period is only a few years too long which can be accommodated with minor adjustments to the length of any of the phases from phase E/2 to D/1.1.

Such a scenario creates an even better overlap with the C14 dates:

Archaeological dates		C14 date		Overlap
(Scheme t)		(2 sigma range)		
Phase C/2	1460–1420 B.C.	Phase C/2 (1)	1667–1537 B.C.	
		Border Phase C/3–C/2 (4)	1668–1543 B.C.	
Phase C/3	1558/56–X			
Phase D/1.1	1590–1558/56 B.C.	Phase D/1 (1)	1668–1601 B.C.	19 years
Phase D/1.2	1620–1590 B.C.			
Phase D/2	1650–1620 B.C.	Phase D/2 (9)	1723–1630 B.C.	20 years
		Border Phase D/3–D/2 (1)	1731–1656 B.C.	
Phase D/3	1680–1650 B.C.	Phase D/3 (6)	1745–1673 B.C.	7 years
Phase E/1	1710–1680 B.C.	Phase E/1 (6)	1759–1693 B.C.	17 years
Phase E/2	1740–1710 B.C.	Phase E/2 (1)	1781–1702 B.C.	38 years
Phase E/3	1770–1740 B.C.	Phase E/3 (1)	1846–1747 B.C.	23 years
		Border Phase F–E/3 (1)	1863–1755 B.C.	
Phase F	1800–1770 B.C.	Phase F (2)	1871–1767 B.C.	27 years
Phase G/1-3	1840–1800 B.C.	Phase G/1–3 (4)	1887–1802 B.C.	38 years

Again phase D/1.2 at 30 years duration is a reasonable length, the burials at the end of stratum D/1.1 could be associated with the conquest of Avaris, and Tuthmosis IV was on the throne before 1400 B.C. Once again, however the lunar dates during the reign of Tuthmosis III are no longer exact, but are off by one day, and the change in orientation of the settlement from phase D/2 to phase D/1.2 is not explained.

- **(u)** *The High chronology is correct but Base Ring I ware appeared at the beginning of the New Kingdom, Tuthmosis II ruled for only three years and the Hyksos Period lasted 160 (-169) years.*

Beginning of Phase C/3	1550 B.C.	
		(Start New Kingdom 1566 B.C.)
Phase D/1.1	1580–1550 B.C.	
Phase D/1.2	1610–1580 B.C.	
Phase D/2	1640–1610 B.C.	

Phase D/3	1670–1640 B.C.	
		(Floruit Khyan – 1670 B.C.)
Phase E/1	1700–1670 B.C.	

- **(v)** *The (Ultra-)High chronology is correct but Base Ring I ware appeared at the beginning of the New Kingdom, Tuthmosis II ruled for 13 years and the Hyksos Period lasted 160 (–169) years.*

Beginning of Phase C/3	1560 B.C.	
		(Start New Kingdom 1576 B.C.)
Phase D/1.1	1590–1560 B.C.	
Phase D/1.2	1620–1590 B.C.	
Phase D/2	1650–1620 B.C.	
Phase D/3	1680–1650 B.C.	
		(Floruit Khyan – 1680 B.C.)
Phase E/1	1710–1680 B.C.	

- **(w)** *The High chronology is correct but Base Ring I ware appeared at the beginning of the New Kingdom, Tuthmosis II ruled for only three years and the Hyksos Period lasted 180 (–189) years.*

Beginning of Phase C/3	1550 B.C.	
		(Start New Kingdom 1566 B.C.)
Phase D/1.1	1585–1550 B.C.	
Phase D/1.2	1620–1585 B.C.	
Phase D/2	1655–1620 B.C.	
Phase D/3	1690–1655 B.C.	
		(Floruit Khyan – 1690 B.C.)
Phase E/1	1725–1690 B.C.	

In this scenario, the correlation with the C14 dates is almost perfect, with the archaeological dates for phases G/1–3 down to E/1 being in complete agreement, with phases D/3, D/2 and D/1 being almost perfect matches.

Archaeological dates		C14 date		Overlap
(Scheme w)		(2 sigma range)		
		Phase C/2 (1)	1667–1537 B.C.	
		Border Phase C/3–C/2 (4)	1668–1543 B.C.	
Phase C/3	1548/46–X			
Phase D/1.1	1585–1548/46 B.C.	Phase D/1 (1)	1668–1601 B.C.	19 years
Phase D/1.2	1620–1585 B.C.			
Phase D/2	1655–1620 B.C.	Phase D/2 (9)	1723–1630 B.C.	25 years
		Border Phase D/3–D/2 (1)	1731–1656 B.C.	
Phase D/3	1690–1655 B.C.	Phase D/3 (6)	1745–1673 B.C.	17 years
Phase E/1	1725–1690 B.C.	Phase E/1 (6)	1759–1693 B.C.	32 years
Phase E/2	1755–1725 B.C.	Phase E/2 (1)	1781–1702 B.C.	30 years
Phase E/3	1785–1745 B.C.	Phase E/3 (1)	1846–1747 B.C.	30 years
		Border Phase F–E/3 (1)	1863–1755 B.C.	

Phase F	1815–1785 B.C.	Phase F (2)	1871–1767 B.C.	30 years
Phase G/1-3	1855–1815 B.C.	Phase G/1–3 (4)	1887–1802 B.C.	40 years

- **(x)** *The (Ultra-)High chronology is correct but Base Ring I ware appeared at the beginning of the New Kingdom, Tuthmosis II ruled for 13 years and the Hyksos Period lasted 180 (–189) years.*

Beginning of Phase C/3	1560 B.C.	
		(Start New Kingdom 1576 B.C.)
Phase D/1.1	1595–1560 B.C.	
Phase D/1.2	1630–1595 B.C.	
Phase D/2	1665–1630 B.C.	
Phase D/3	1700–1665 B.C.	
		(Floruit Khyan – 1700 B.C.)
Phase E/1	1735–1700 B.C.	

This time the match with the C14 is almost perfect:

Archaeological dates		C14 date		Overlap
(Scheme x)		(2 sigma range)		
		Phase C/2 (1)	1667–1537 B.C.	
		Border Phase C/3–C/2 (4)	1668–1543 B.C.	
Phase C/3	1558/56–X			
Phase D/1.1	1595–1558/56 B.C.	Phase D/1 (1)	1668–1601 B.C.	29 years
Phase D/1.2	1630–1595 B.C.			
Phase D/2	1665–1630 B.C.	Phase D/2 (9)	1723–1630 B.C.	35 years
		Border Phase D/3–D/2 (1)	1731–1656 B.C.	
Phase D/3	1700–1655 B.C.	Phase D/3 (6)	1745–1673 B.C.	27 years
Phase E/1	1735–1700 B.C.	Phase E/1 (6)	1759–1693 B.C.	17 years
Phase E/2	1765–1735 B.C.	Phase E/2 (1)	1781–1702 B.C.	30 years
Phase E/3	1795–1765 B.C.	Phase E/3 (1)	1846–1747 B.C.	30 years
		Border Phase F–E/3 (1)	1863–1755 B.C.	
Phase F	1825–1795 B.C.	Phase F (2)	1871–1767 B.C.	30 years
Phase G/1-3	1865–1825 B.C.	Phase G/1–3 (4)	1887–1802 B.C.	40 years

Conclusions

From an archaeological point of view, it can be seen that the length of reign of Tuthmosis II is somewhat immaterial; whether he reigned for three or thirteen years simply moves the position of Khyan up or down by ten years in real time.

Of more importance are (i) the questions of whether the length of the Hyksos Period is reasonable since clearly if a scheme has a 108 year total length for the Hyksos Period as a primary criterion, but would appear to last for 165 years, then clearly such a scenario is a non-starter. This immediately discounts models g, h, q, and r, or four of the thirty various schema as impossible;

(ii) whether Tuthmosis IV would have come to the throne before 1400 B.C., and could thus have been in contact with Kara indash and Assur-bel-nise-su. This disqualifies all 16 models (a)–(l) which utilize the low chronology. However this correlation is only known from the Amarna letters written two generations after the event;

and (iii) the length of phase D/1.1. Any scheme which attributes over 40 or 50 years to this phase is probably incorrect. This would disqualify the two hypotheses (o2) and (p2).

Of perhaps lesser importance are the following questions:

(iv) Are the changes in settlement orientation between phases D/2 and D/1.2 the result of the incoming 18th Dynasty, since it is possible that such changes could have also occurred during the Hyksos Period. For what it is worth, eleven of the thirty schemes, namely (a), (b), (c1), (d1), (e1), (f1), (m), (n), (o1), (o2), and (p1) all allow for this change in orientation to have taken place at the end of the Hyksos Period, whereas in nineteen schemes (c2), (d2), (e2), (f2), (g)–(l), (p2) and (q)–(x) this change must have taken place during the late Hyksos Period.

(v) Could the soldier burials at the end of phase D/1.1 be associated with the conquest of Avaris? This would be an interesting datum line, but the fact that such burials did not occur until well into the 18th Dynasty cannot be excluded, especially as it is known that the early 18th Dynasty Pharaohs campaigned in the Levant. Again for what it is worth in the twenty schemes (e2), (f2), (g)–(l), (p2), and (q)–(x), this would be a definite possibility, and only in ten schemes (a)–(d), (e1), (f1), (m)–(o) and (p1) would it be stratigraphically impossible.

The question of whether phases C/3 and C/2 are of more than 30 to 40 years duration, which seems endemic in any scheme in which the beginning of the New Kingdom occurs at the beginning of phase C/3 is of little importance since in the latest Tell el-Dab^a chronological charts both these phases are given a 40 year length.

From the above, ›archaeological arguments‹, therefore, it is clear that Khyan must have flourished anywhere around 1700 B.C. at the earliest (scheme [x]), and 1580 B.C. at the latest (scheme [a]).

When one turns to the natural sciences, it may also be asked whether it is of great importance whether the Egyptian lunar dates are absolutely perfect or whether they are off by one day since a one day difference is acceptable to modern astronomers, and none of the postulated schemes fall out of this window. For what it is worth schemes (a)–(j) have a perfect astronomical fit as long as only Egyptian observations are considered, whilst schemes (m)–(x) are off by one day. When one considers the Carbon 14 dates, schemes (a)–(p) imply that there is a C14 offset, which varies from a minimum 80–90 years (scheme a), down to a minimum 50–60 years (schemes g–j, p2). In schemes (q)–(t) there is a partial overlap with the C14 dates at a two sigma range, although it must be remembered that (q) and (r) are impossible due to the fact that in both those schemes the Hyksos Period is too long. In versions (u)–(x), there is practically no offset at all.

Whilst it is clear that schemes (g), (h), (q), and (r) are impossible, and (o2), and (p2) are unlikely, it is not certain which, if any, of the others are ›correct‹ – and the only way out of this impasse would be more data. All of these schemes are dependent on criteria which are, in our current state of ›conventional archaeological knowledge‹, uncertain. Is the Low or High chronology correct?; or with Rita Gautschy should we utilise a 1493 B.C. accession date for Tuthmosis III¹³²? Did Tuthmosis II rule for three or thirteen years? How long was the Hyksos Period? When did Base Ring I and White Slip I ware first appear? When did typical Tuthmosid pottery first evolve? Nevertheless it is clear that whichever combination of these uncertain criteria is used, the border between phases E/1 and D/3, and therefore the floruit of Khyan, comes out at around 1580 B.C. at the latest (scheme [a]) and 1700 B.C. at the earliest (scheme [x]), with most of them coming out somewhere in between.

By using Schneider's maximum reading of 189 years for the summation of the years of rule of the Hyksos kings, then at the extreme earliest, Hyksos rule would have begun 189 years before year 18/20 of Ahmose, which on the Ultra-High chronology can be set at 1558/1556 B.C. This implies that Hyksos rule began in 1745/1743 B.C. at the extreme earliest. Since Khyan would appear to be the third king, of seven, it is highly unlikely that his reign would have started much before 1720 B.C. Thus it is, by utilising conventional archaeological methods, possible

¹³² Gautschy 2014, 153.

that Khyan was indeed a contemporary of Sobekhotep IV, who, following Ryholt (1997) was the twenty-ninth king of the 13th Dynasty, who ruled around 1732–1720 B.C.¹³³, or following Schneider, (2006) was the twenty-fourth king of the 13th Dynasty dating between 1709 and 1701 B.C.¹³⁴. It should also be borne in mind that by using conventional archaeological methods, scheme (x) has much to recommend it: Mention has been made above of F/II locus 637 in which sealings of Neferhotep I, and his predecessor, Sobekhotep III, were found in a rubbish deposit, in association with large amounts of Hyksos Period pottery, which hints at the near contemporaneity of these kings and the Hyksos Period. It suggests that the Egyptian High chronology, with Tuthmosis IV coming to the throne before 1400 B.C., and hence able to be in direct contact with the Babylonian Kara-Indash, is more likely to be correct than the Low chronology. It would help confirm that ›typical‹ Tuthmosid pottery first occurred during the reign of Tuthmosis I as hinted by the material from Tundaba and TT 320. Moreover with black rims first appearing in °Ezbet Helmi in stratum D/1.1, this supports the idea that black rims were indeed present during the late Second Intermediate Period/early 18th Dynasty since, in scheme (x), D/1.1 has a 15–17 year overlap between the late 15th Dynasty and the late 17th Dynasty, and an 18–20 year overlap between the late 15th and the early 18th Dynasties. It would also corroborate the view that Base Ring I ware occurred early in the New Kingdom, and that if White Slip I first appears in Cyprus around 20–30 years before the beginning of the New Kingdom in Egypt, it ties in very well with the White Slip bowl found on Santorini buried beneath the ash layer¹³⁵. It would also explain why the pottery from phases D/1.1 and D/1.2 differs little from the preceding phase D/2 as all of it could be considered as Hyksos. Moreover scheme (x) is *the only one* which fits at all well with the El-Kab genealogies, which thus work out at around 18–22 years per generation¹³⁶. The seven Hyksos kings would reign on average for 25–26 years each, not unreasonable, considering that the only ones we know are Khamudi who reigned 11 years and his predecessor, Apophis, who reigned at least 33 years and probably 40 + x, and he is usually given 44, whilst Apophis' predecessor (Seker-Har, according to Schneider) may have reigned for 30 + x years. By utilising the dates of scheme (x), with the conquest of Avaris by Ahmose in 1558/1556 B.C., then Khamudi, reigned 11 years would have been on the throne between 1569/1567–1558/1556 B.C., Apophis, 1613/1611–1569/1567, Seker-Har 1643/1641 or earlier – 1613/1611, Yanassi, with a reign of average length (25–26 years), 1669/1667–1643/1641, Khyan, X–1700–1669/1667 and the first two Hyksos kings from 1745/1743–X (but before 1700) B.C. The Hyksos levels at Tell el-Dab^a, would, if the New Kingdom begins with phase C/3, be an average of 35 years duration each, with the first two kings contemporary with phase E/2–E/1, Khyan, phase E/1–D/3, Yanassi, phase D/3–D/2, Seker-Har, phase D/2–D/1.2, Apophis, phase D/1.2–D/1.1 and Khamudi, phase D/1.1. The soldier burials at the end of this phase would also fit with Bietak's original suggestion that they died during the battle for Avaris. The fact that scheme (x) fits exactly with the Carbon 14 dates is, perhaps, an additional bonus.

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¹³³ Ryholt 1997, 197.

¹³⁴ Schneider 2006, 176. 492.

¹³⁵ Merrillees 2001b, 89–93; Merrillees 2009, 248.

¹³⁶ T. Schneider, this volume.

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Natasha D. Ayers

Pottery from the Late Middle Kingdom through the Second Intermediate Period at Tell Edfu

The Broader Archaeological Context of the Khyan Sealings

Recent excavations at Tell Edfu uncovered 41 seal impressions bearing the cartouche of the Hyksos ruler Khyan in the abandonment layer of an administrative building complex¹. The discovery of a large number of Khyan sealings within a sealed, secure archaeological context warrants further research and discussion concerning how the new information coming from Tell Edfu affects our current knowledge of the Second Intermediate Period². The pottery corpus found in the same context as the Khyan sealings is also a crucial source of information for understanding the chronology and material culture of the early Second Intermediate Period in Upper Egypt³.

As one of the current goals of the Tell Edfu Project is establishing the chronological context for the seal impressions of Khyan, the pottery in this study is presented with a focus on the question of chronology⁴. Selections from the Edfu corpus are presented with this goal in mind. The broader archaeological context for the pottery and the Khyan sealings is presented by including the pottery from the contexts immediately preceding and following the layers where the Khyan sealings were found, thus providing preliminary results for the pottery from the late Middle Kingdom through the Second Intermediate Period. For each context, there is a brief description of the archaeological context, a description of important chronological results based on the pottery, and descriptions and discussion of the selected vessels. Full assemblages are not presented here, due to constraints of space and due to the specific goal of this preliminary analysis: providing a broader archaeological and chronological context for the Khyan sealings.

Defining the early Second Intermediate Period at Tell Edfu

Few sites with early Second Intermediate Period pottery in stratified archaeological contexts are known. As a consequence, there are many unresolved questions about this period, such as when does the early Second Intermediate Period begin and end according to the material culture, rather than political events? In terms of Egyptian history, the Second Intermediate Period begins under Merneferre Ay when the royal residence is said to move from Itj-Tawy to Thebes and ends with the defeat of the Hyksos at the end of the 17th Dynasty. Our understanding of the relationship

¹ More detailed descriptions and explanations of the archaeological context have been published in N. Moeller – G. Marouard, this volume; Moeller et al. 2011; Moeller 2011, 111–120; Moeller 2010, 81–111; Moeller 2009, 117–125; Moeller 2008, 118–123.

² For the sealings, see N. Moeller – G. Marouard, this volume.

³ Many thanks to Dr. Nadine Moeller for permission to study and publish the Tell Edfu pottery. The full pottery corpus from Tell Edfu appeared in the author's dissertation, *Cultural Change in Upper Egypt from the Late Middle Kingdom through the Second Intermediate Period: A New Analysis of the Ceramic Material* (unpubl. PhD thesis Chicago 2017).

⁴ For previous preliminary publications of the pottery from the recent University of Chicago/Oriental Institute excavations, see Ayers 2016; Moeller et al. 2011, 112–119; Ayers – Moeller 2012.

between the 13th Dynasty, the 14th and 15th Dynasties of the Hyksos, and the 16th and 17th Dynasties at Thebes continues to change as new data and interpretations are added to the discussion⁵. Assigning absolute dates to the Second Intermediate Period is problematic and not the goal of this study. It is important to bear in mind that changes in material culture rarely follow political changes and changes in material culture can, and often do, follow different trajectories throughout Egypt. Anne Seiler discovered that Thebes follows a different path in the development of its material culture in the late Middle Kingdom and Second Intermediate Period than what occurs in the north⁶. Edfu follows this model of divergence in the development of its material culture.

The Edfu material is new data and the study of the pottery is in its preliminary stages. It is the author's goal not to lose any information from this important data source by forcing the pottery to fit within a chronological paradigm devised for a different site or arbitrarily applying hard boundaries of separation between archaeological layers that mark continuous occupation and a continuation of a pottery tradition. It is evident that the abandonment of the southern columned hall includes a large quantity of pottery from the late 12th – early 13th Dynasty and some types, such as the beer bottles (discussed below), carry the context into the mid-13th Dynasty. There is no break in the use of the administrative building complex and the subsequent abandonment of the northern columned hall (the context with the Khyan sealings) belongs to the early Second Intermediate Period. At Edfu, the pottery tradition assigned to the early Second Intermediate Period picks up where the early to mid-13th Dynasty occupation leaves off and it ends with the appearance of Theban style pottery of the late Second Intermediate Period that continues to be used into the early 18th Dynasty.

Pottery from the abandonment of the southern columned hall

An administrative building complex with two excavated columned halls, referred to as the southern columned hall and the northern columned hall, was founded in the early 12th Dynasty and used continuously until the final abandonment of the complex in the early Second Intermediate Period⁷. The mud floors in both columned halls were periodically renewed. Between the floor levels in the southern columned hall, excavations uncovered pottery sherds dating to the 12th Dynasty and numerous seal impressions, including those with the name of Amenemhat III, trapped in these successive levels⁸. When this southern columned hall fell out of use, a large amount of pottery sherds, animal bones, seal impressions, and various other objects remained abandoned on the final floor level. The pottery from this abandonment layer (US 2079. US 2280⁹) belongs predominantly to the late 12th Dynasty – early 13th Dynasty pottery phase, with some vessels extending the context into the mid-13th Dynasty. Chronologically, this context and pottery corpus immediately precede the context with the seal impressions of Khyan.

Selection of open vessels

Hemispherical cups

The ubiquitous Middle Kingdom hemispherical cup is found in the abandonment layer of the southern columned hall and these examples are not uniform in their body contour or diameter. To date, four different types have been identified in this assemblage. This includes cups with a

⁵ See N. Moeller – G. Marouard, this volume.

⁶ Seiler 2005, 132–134; Seiler 2012, 316–320.

⁷ For a more detailed description of the southern columned hall, see N. Moeller – G. Marouard, this volume.

⁸ For the pottery from these floor levels, see Ayers 2016, 4–8 fig. 2 and Moeller et al. 2011, 112–113 fig. 14; 116–117.

⁹ US stands for ›stratigraphic unit‹ after the recording system developed in France that uses the term ›unité stratigraphique‹ = US. The excavations at Tell Edfu employ the open area excavation method and record all the archaeological layers as stratigraphic units in addition to features (i.e. walls, floors, fire places, etc.).

nearly perfectly hemispherical contour and diameters of 12 and 13 cm (ED 2079.50; fig. 1 a), as well as cups with inflected (s-shaped) upper walls and diameters of 11 and 12 cm. There are two types of hemispherical cups with straight or nearly straight upper walls. The first type has a rim diameter of 11 cm (ED 2079.34; fig. 1 b) and the second type has a rim diameter of 10 cm (ED 2079.89; fig. 1 c). The latter is also deeper than the other three types of hemispherical cups. Bases for the hemispherical cups are rounded and trimmed with a tool (ED 2079.50; fig. 1 a) and most of the cups have a thin red band at the rim. The hemispherical cups are made of Nile B1 fabric (91.24 %) ¹⁰ and, less commonly, in Nile B2 fine fabric (8.76 %) ¹¹.

The ›vessel index‹ (maximum diameter / height × 100 = ›vessel index‹), developed by Hans-Åke Nordström ¹², was first employed with great success in establishing the chronology and evolution of the hemispherical cups by Dorothea Arnold ¹³. At Edfu, however, variation in types of hemispherical cups found together in a single context and the rarity of full profiles make it difficult to use the ›vessel index‹ as an informative tool in regard to parallels from other sites. The regional, and even site-by-site, variation in the development of the hemispherical cup has been noted by other scholars ¹⁴. Robert Schiestl and Anne Seiler's study of hemispherical cups concluded that although the shape generally evolves from shallow and unrestricted to deep and slightly restricted, the different shapes did not appear in succession, but rather coexisted over lengthy periods of time ¹⁵. The Edfu hemispherical cups do generally show a development towards deeper and more restricted cups. Schiestl and Seiler also state that especially in the period under discussion here, the late 12th and 13th Dynasty, ›the various types of hemispherical cups appear to have been variations on a theme‹ with both shallow, unrestricted cups and deep, slightly restricted cups produced and used concurrently ¹⁶. Edfu follows this phenomenon of regional variation in the production of hemispherical cups with multiple varieties being produced and used in the same time period.

Bearing the propensity for regional variation and the concurrent use of various shapes in mind, the best parallels for the Edfu hemispherical cups with a nearly perfectly hemispherical body contour and a diameter of 12 to 13 cm (ED 2079.50; fig. 1 a) come from Thebes ¹⁷ and Abydos ¹⁸, dating to the late 12th – early 13th Dynasty and late 12th – mid-13th Dynasty, respectively. The closest parallels for the hemispherical cups with nearly straight upper walls and diameters of 11 cm (ED 2079.34; fig. 1 b) are also found at Abydos ¹⁹ and Thebes ²⁰ in the late 12th – early 13th Dynasty.

Hemispherical bowls

Among the bowls left behind after the abandonment of the southern columned hall are hemispherical bowls. One type of hemispherical bowl has thick walls, a scraped rounded base and a

¹⁰ ›Estimated vessel equivalent‹ (eve) is the method of quantification used at Tell Edfu.

¹¹ The Vienna System is used here to describe the fabrics identified at Tell Edfu. For the Vienna System, see Nordström – Bourriau 1993.

¹² Nordström 1972, 71–72.

¹³ Arnold 1988, 128 fig. 65; 140–141.

¹⁴ For this phenomenon at Thebes, see Seiler 2012, 318–320 and Seiler 2010, 42: Concerning the development of beer bottles and application of the ›vessel index‹ for hemispherical cups, Seiler states, ›The regional character of the pottery development at Dra' Abu el-Naga is confirmed by the impossibility here of using any of the well-established tools for dating pottery from the Middle Kingdom and early Second Intermediate Period.‹ For further attestation of the regional development of hemispherical cups, see Bader's comparison of the developments at Kom Rabi'a (Memphis) and Tell el-Dab'a (Avaris) in Bader 2009, 149–159 and Bader 2007, 251–258. 265.

¹⁵ Schiestl – Seiler 2012, 84.

¹⁶ Schiestl – Seiler 2012, 84. 86.

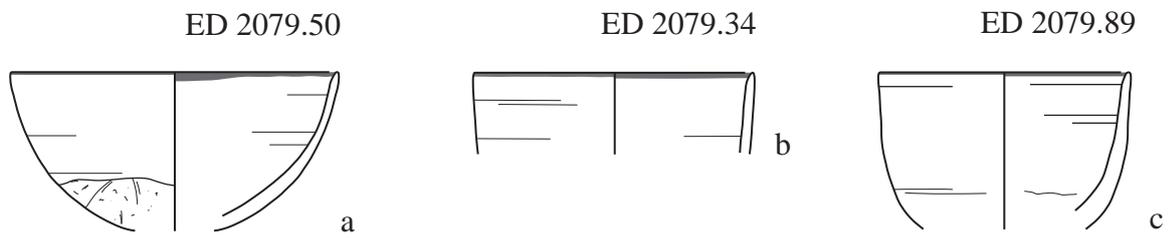
¹⁷ Millet 2008, 693 pl. 27: 8081.18. (Phase 6 = late 12th – early 13th Dynasty); Loyrette et al. 1993/1994, 121–122 fig. 4 b–e. The pottery in this tomb dates to the late 12th – early 13th Dynasty.

¹⁸ Wegner 2007, 260 fig. 110, esp. 1–2. 4–7. The Abydos hemispherical cups are similar to this Edfu example in terms of shape contour and measurements. Parallels were found in the West block refuse deposits, which contained pottery dating from the late 12th – mid-13th Dynasty.

¹⁹ Wegner 2007, 233–234 fig. 98, 1.

²⁰ Millet 2008, pl. 257: 8084.11 (Phase 6 = late 12th – early 13th Dynasty).

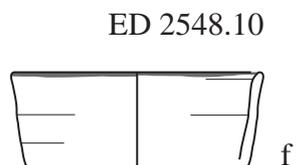
Abandonment of S. Columned Hall



Final Abandonment of N. Columned Hall



Temporary Occupation



2nd Phase of Silo Construction



1 5 cm

Fig. 1 Selection of hemispherical cups (1 : 3) (Drawing N. D. Ayers)

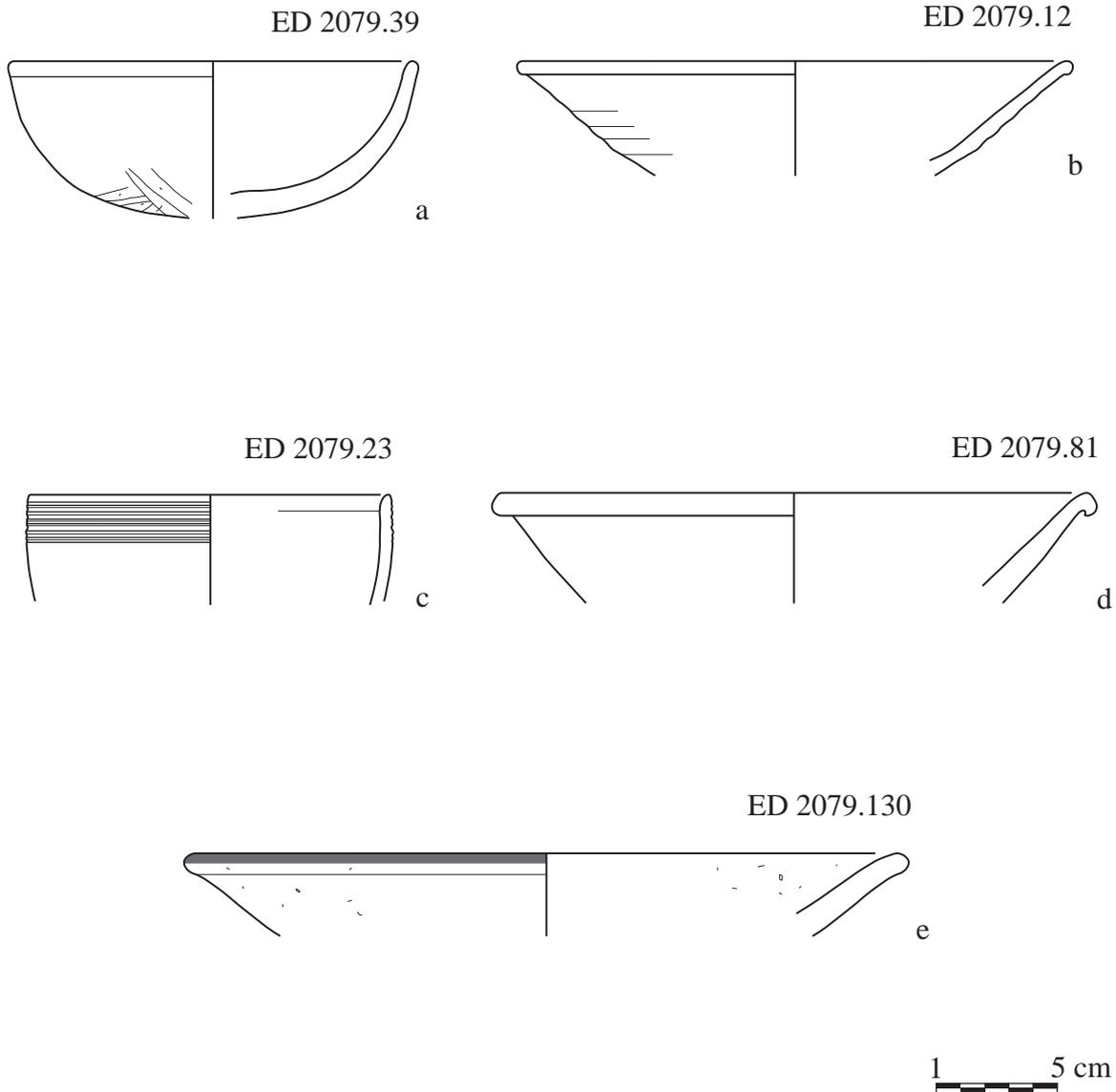


Fig. 2 Abandonment of south columned hall: selection of open vessels (1 : 3) (Drawing N. D. Ayers)

diameter of 17 cm (ED 2079.39; fig. 2 a). It is covered in a reddish-brown slip and the interior is burnished. A second type of hemispherical bowl has a group of seven finely incised horizontal lines below the rim (ED 2079.23; fig. 2 c). This bowl is covered in red slip on the interior and exterior surfaces and the diameter is 15 cm. Both types of hemispherical bowls are made of Nile B2 fabric.

Simple bowls

Bowls with simple contours are a common type in this late Middle Kingdom corpus. These simple bowls have modeled rims, but the resulting rim shapes vary. The diameters range from 15 cm to 41 cm and the fabrics employed are Nile B2 fine, Nile B2, and Nile C. Simple bowls with modeled rims exhibit a variety of surface treatments, including an uncoated surface, red slip on the interior surface and the exterior rim, and red slip on the interior and exterior surfaces (ED 2079.12; fig. 2 b). The latter can also have burnished interior and exterior surfaces (ED 2079.81; fig. 2 d). Bases for simple bowls can be rounded, flat, or ring bases.

Inflected bowls

The assemblage from the abandonment of the southern columned hall includes bowls with inflected²¹ contour. These inflected bowls have modeled rims and rounded bases. The fabric is Nile C and red slip covers the interior surface and the exterior rim (ED 2079.130; fig. 2 e). The rim diameters are approximately 30 cm.

Slightly restricted bowl (cooking pot)

Different types of restricted and slightly restricted bowls were used as cooking pots at Edfu and they are identifiable not only by their shape, but by the soot/burning on the exteriors of the bowls. One of these cooking pots is a slightly restricted bowl with simple contour and a direct rim (ED 2079.61; fig. 3 a). The exterior of the rim was flattened with a tool and three incised horizontal lines are spaced across the exterior. Red slip covers the interior and exterior surfaces and the large rim diameter is 42 cm. This wheelmade rim sherd is made of highly fired Nile B2 coarse fabric. This type of cooking pot has a rounded base.

Bread moulds

Slender, cylindrical bread moulds are handmade in Nile C fabric with a greyish-white firing skin on the exterior surface. Most examples have a thin Nile silt coating on the interior to smooth the surface. This interior coating can be orange or tan/brown in color. The Edfu cylindrical bread moulds can be divided into small and medium sizes based on rim diameter and wall thickness. Small size bread moulds have rims that are slightly everted (ED 2079.66; fig. 3 b) or flattened on the top of the rim and the diameter range is approximately 5 to 6 cm. Medium size bread moulds have the same rim shapes as the small size, with the addition of one example with a modeled rim. The diameter range for these bread moulds is approximately 6 to 7 cm and the walls are thicker than the smaller sized examples. Edfu cylindrical bread moulds have narrow base diameters of 2.3 to 3.2 cm. The bases are typically completely flat, a roughly flat shape (ED 2079.36; fig. 3 d), or a roughly rounded shape (ED 2079.68; fig. 3 c). Far more rare are bases with a pierced hole.

Selection of closed vessels

Beer bottles

The colloquially termed beer bottle with ›kettle mouth‹ is the most common closed vessel (50.7 % of the closed vessel corpus) and can be divided into two main types based on the neck contour: straight and sloping. The introduction into the corpus of the beer bottles with a sloping neck contour (ED 2079.31; ED 2079.32; fig. 4 c–d) appears to be later than those with a straight neck contour (ED 2079.1; ED 2079.71; fig. 4 a–b). There is much variation in the height of the rim and depth of the ›kettle mouth‹ and rim diameters range from 9.5 to 12 cm. The beer bottles are made of a highly fired Nile C fabric and more rarely in Nile B2 coarse fabric. A red or red-orange slip covers the exterior surface and often the interior rim.

As with the hemispherical cups, regional variation is evident with the ›kettle mouth‹ beer bottles²². At Edfu, not only are there intersite differences due to regional/local production of these bottles, but also intrasite differences, especially in the execution of the ›kettle mouth‹. The beer bottles found in the abandonment of the southern columned hall show a diverse range of types used

²¹ The term inflected refers to a vessel contour that changes from concave to convex or vice versa. For a more detailed description of this type of contour, see Schiestl – Seiler 2012, 34. 50 fig. 20.

²² Regional variation in beer bottles and the use of types for long and overlapping periods of time has been noted by many scholars, such as Bader 2007, 261; Schiestl – Seiler 2012, 643: »It is also becoming clear that the periods of circulation of some shapes (fig. 24 a, b) are much longer when the settlement material is taken into account. In this period [late 12th and 13th Dynasty], numerous different types run parallel with each other over longer periods of time.«

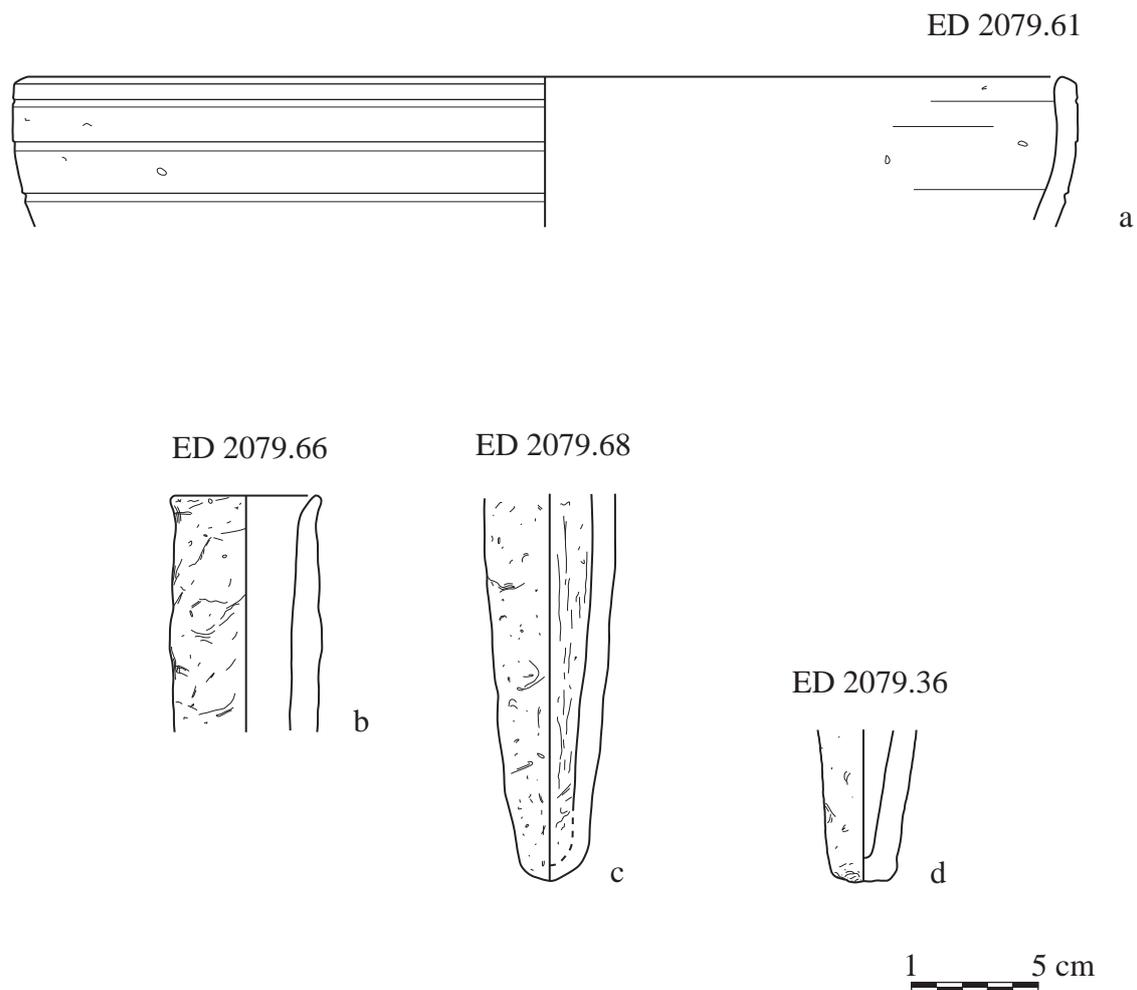


Fig. 3 Abandonment of south columned hall: selection of bread moulds and cooking pot (1 : 3) (Drawing N. D. Ayers)

in the same time period and in the same building. This concurrent production/use of multiple types of beer bottles has made productive application of the ›aperture index‹ challenging, thus far²³.

Some possible parallels are presented cautiously, given the issue of regional/local production discussed above. Bottle ED 2079.1 (fig. 4 a) has a ›kettle mouth‹ and straight neck contour known from many sites in Egypt in the late 12th – early 13th Dynasty²⁴. The wide, sloping neck contour and ›kettle mouth‹ shapes of ED 2079.31 (fig. 4 c) and ED 2079.32 (fig. 4 d) find comparisons with bottles of the early 13th – mid-13th Dynasty²⁵. First observations of the beer bottles seemed to point to a late 12th – early 13th date for all of the beer bottles; however, further analysis and discus-

²³ Dorothea Arnold created a method for understanding the chronological sequence of beer bottles based on the ›aperture index‹ (narrowest diameter of the neck/the width of the aperture \times 100 = ›aperture index‹), Arnold 1988, 141–143 fig. 76. A second ›aperture index‹ (full diameter of the aperture/height of the rim \times 100 = ›aperture index 2‹) was created by Szafranski for use with ›kettle neck‹ beer bottles, Szafranski 1998.

²⁴ Loyrette et al. 1993/1994, 122 fig. 4; 123. This beer bottle was found in a late 12th – early 13th Dynasty tomb; Wegner 2007, 243 fig. 102, 49; 245. 265 fig. 115. The refuse deposit of the West Block dates from late 12th – mid-13th Dynasty. The ›kettle mouth‹ of the Edfu bottle is not as deep or recessed as those of the Abydos examples.

²⁵ Schiestl – Seiler 2012, 674–677: »It dates to the first half of the 13th D, in particular to the second quarter and middle of the 13th D.«

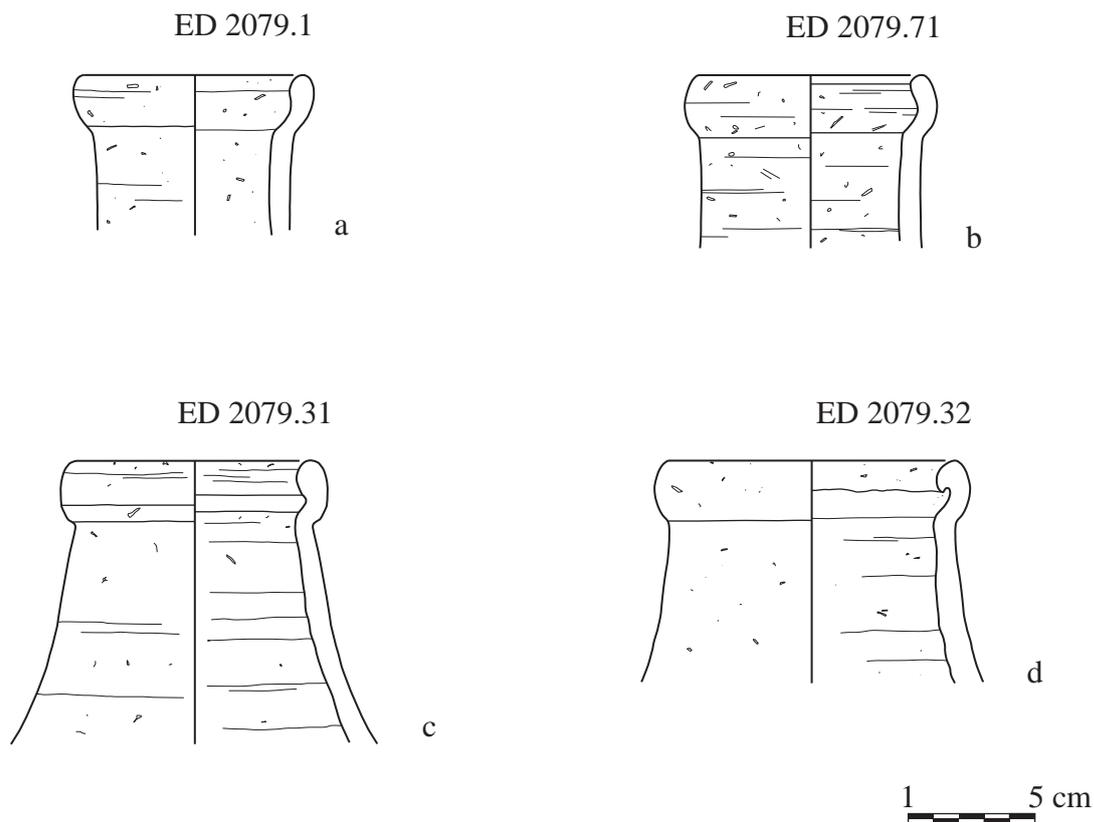


Fig. 4 Abandonment of south columned hall: selection of beer bottles (1 : 3) (Drawing N. D. Ayers)

sion shows a mid-13th Dynasty date to be most plausible for some of these bottle types and indeed for the chronological extent of this archaeological context²⁶.

Jars with elongated direct rim

Frequently found at Edfu are jars with elongated direct rims that are straight (ED 2079.7; fig. 5 c) or slightly everted (ED 2079.77–79; fig. 5 a–b. d). All of these jars are uncoated and made of highly fired Nile C fabric or, more rarely, in Nile B2 fabric. There are no complete profiles for these jars; however, some of the flat jar bases in this corpus likely belong to this jar type.

Bottle with modeled rim

Another type of bottle from the abandonment of the southern columned hall is a Marl A3 bottle with modeled rim and tall cylindrical neck (ED 2079.59; fig. 5 e). The diameter is 10 cm and the surface is well smoothed and uncoated. Parallels from the late 12th – early 13th Dynasty at Elephantine²⁷ and from late 12th – 13th Dynasty burials at Nag el-Qarmila²⁸ confirm the date of the Edfu bottle, which is a precursor to the type found in the early Second Intermediate Period and discussed below (figs. 7 f; 9 b).

²⁶ I greatly appreciate the informative comments and discussion with colleagues at the workshop in Vienna regarding the mid-13th Dynasty beer bottles.

²⁷ Rzeuska 2012, 352–353 figs. 11. 67.

²⁸ Gallorini – Giuliani 2012, 324–325 (for jar). 327–328 (for date).

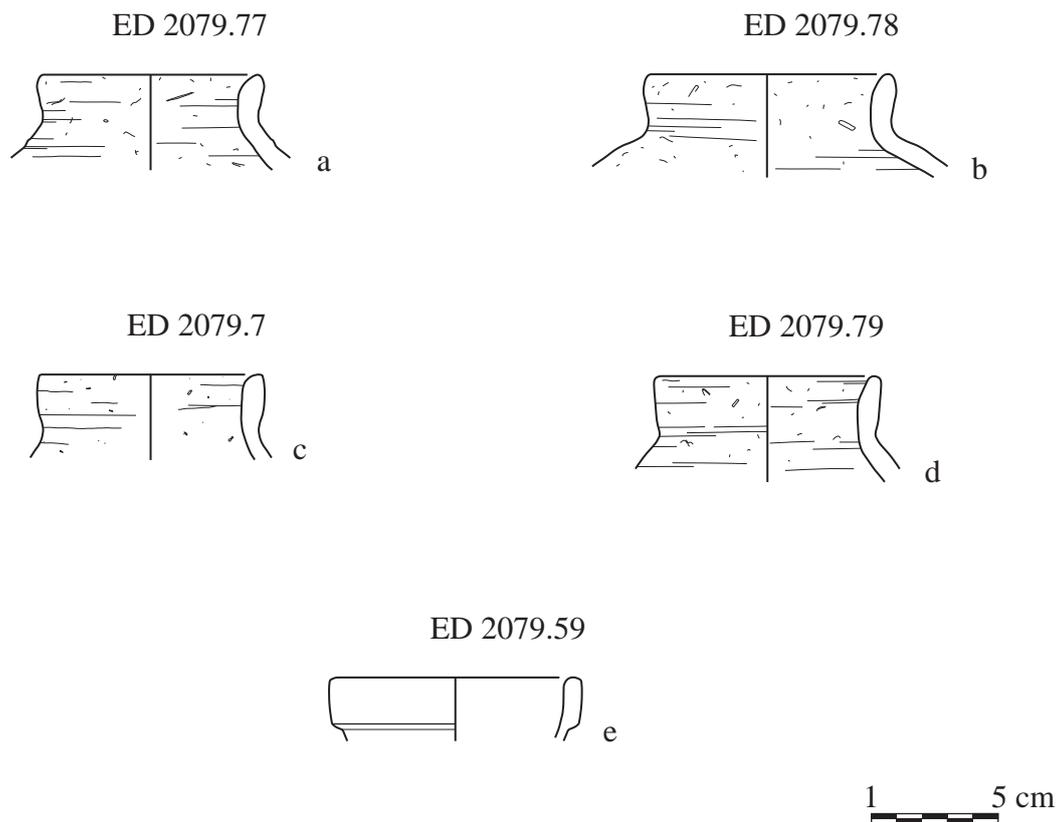


Fig. 5 Abandonment of south columned hall: selection of closed vessels (1 : 3) (Drawing N. D. Ayers)

Imported vessels

In addition to Upper Egyptian pottery, the corpus from the abandonment of the southern columned hall includes imports from Lower Egypt and imports from outside of Egypt. Late Middle Kingdom *zirs* in both Marl C1 and Marl C2 variants are present. Marl C is not an Upper Egyptian fabric and these *zirs* made their way to Edfu from Lower Egypt²⁹. Imports from outside of Egypt are represented by Levantine Painted ware juglets dating to the 12th Dynasty³⁰. One of the Edfu examples of Levantine Painted ware is the lower body and base of a dipper jug with horizontal bands executed in red paint. The base of the dipper jug still contains resinous remains of its former contents³¹. This type of dipper jug decorated with horizontal bands has been found at two other sites in Egypt: Elephantine and Tell el-Dab^ca³². The more complete example of Levantine Painted ware from Edfu is a long-necked jug with a criss-cross band pattern painted in red and black. Tell el-Dab^ca is the only other site in Egypt where a long-necked jug with this decorative motif has been identified³³.

²⁹ Bader 2001, 30–36.

³⁰ Bagh 2013, 64–65.

³¹ Analysis of the resinous substance is not possible at this time.

³² Bagh 2013, 174 fig. 11.

³³ Bagh 2013, 176 fig. 13.

Nubian vessels

Nubian pottery is found in every chronological phase at Edfu. Part of the corpus of the abandonment of the southern columned hall includes sherds of semi-restricted bowls handmade in a coarse, highly friable fabric. The soot-covered exterior surfaces of this type of Nubian vessel attest to these bowls being used as cooking pots. These most likely Pan-Grave sherds are incised predominantly with a criss-cross pattern³⁴. One restricted bowl with rounded rim has deeply incised horizontal and oblique lines. Another restricted bowl exhibits a zig-zag motif over horizontal lines and a horizontal row of impressed dots separates the incised area from the rounded rim zone. A black-topped vessel with a not well defined black zone has a narrow horizontal line setting off the rim area.

Pottery from the final abandonment of the northern columned hall

The northern columned hall continued in use for a period of time after the southern columned hall had fallen out of use³⁵. Within the context of this final abandonment layer, marking the end of the functioning of this administrative complex (US 2654. US 2732/33/34), 40 seal impressions bearing the name of Khyan and six seal impressions of Sobekhotep IV were discovered³⁶. This is a sealed, secure archaeological context without any intrusions from later occupation. Continuity with the late Middle Kingdom pottery tradition is apparent in the continued production/use of many vessel types, many fabric types, and methods of production. This does not mean the pottery corpus shows no change. In fact, there are new types appearing for the first time in these layers and some types common in the preceding late Middle Kingdom layers now comprise a smaller percentage of this early Second Intermediate Period corpus. The pottery, along with the sealings and a ¹⁴C sample³⁷, confirm a date in the early Second Intermediate Period (late 13th Dynasty) for the final abandonment of the northern columned hall. As previously stated, this context is a continuation of the use of this building complex without any lapse in time. This means the mid-13th Dynasty, evident in the previous context, likely continues into the final abandonment layer.

Selection of open vessels

Hemispherical cups

Hemispherical cups from the abandonment of the northern columned hall typically have a slightly open contour and a diameter of 10 cm (ED 2654.51; fig. 1 e), an inflected (s-shaped) contour and a diameter of 9 cm (ED 2654.1; fig. 1 d), or a straight contour with a diameter of 9 cm or 10 cm. All examples have a red band at the rim that in some cases is executed less precisely than on the earlier hemispherical cups. These cups are produced in Nile B1 and Nile B2 fine fabrics in almost equal quantities. There are comparable examples from other sites (e.g. Thebes³⁸) for the Edfu hemispherical cups like ED 2654.51 with regard to the shape and diameter of 10 cm. These fit with a type known from Amenemhat III – early Second Intermediate Period³⁹. Cups with a straight contour find excellent parallels, even in the north of Egypt⁴⁰. Productive parallels for Edfu

³⁴ For some of the Nubian pottery from the columned hall, see Ayers – Moeller 2012, 107 figs. 4 a–b; 6: ED 2078.N.1; ED 2280.N.1.

³⁵ For a more detailed description of the northern columned hall, see N. Moeller – G. Marouard, this volume.

³⁶ The 41st Khyan seal impression is from a different context.

³⁷ For discussion of the ¹⁴C samples and results, see N. Moeller – G. Marouard, this volume.

³⁸ Seiler 2012, 318 fig. 19, 7. 8 (Phase III.2 = 2nd third – end of the 13th Dynasty).

³⁹ Schiestl – Seiler 2012, 106–107.

⁴⁰ Bourriau – Gallorini 2016, fig. 135, 22a5.2 (mid to late 13th Dynasty, Level VI).

hemispherical cups like ED 2654.1 with the inflected (s-shaped) upper walls and diameter of 9 cm are more difficult to identify. Once again, the regionalism in ceramic production in Upper Egypt during the late Middle Kingdom – early Second Intermediate Period, is evident at Edfu.

*Shallow carinated bowls*⁴¹

A common vessel type in the early Second Intermediate Period layers at Edfu is the shallow carinated bowl (ED 2734.5; fig. 6 a). These small bowls have everted rims with diameters of 9 to 11 cm. All examples have a string-cut base and the lower body below the carination is scraped with a tool. The bowls are made of Nile B2 fabric and most examples have an uncoated surface; however, a small number of examples have a thin red slip haphazardly applied to the interior. This type of bowl is a hallmark for the early Second Intermediate Period at Edfu⁴².

Simple bowls

A diverse assemblage of bowls were found in the final abandonment of the northern columned hall. Bowls with simple contour and rolled rims (ED 2654.10; fig. 6 d) show continuity with the Middle Kingdom tradition⁴³. They have a thick red slip on the interior and exterior surfaces, well burnished interiors (not pattern burnishing), and ring bases like ED 2654.16 (fig. 6 c). These Edfu bowls with thick walls and rolled rims are immediately distinguishable from the late 17th – early 18th Dynasty evolution of the shape, which exhibits thinner walls and a more triangular rim shape. In addition to ring bases, the early Second Intermediate Period layers contain flat bowl bases covered in red slip on the interior and exterior surfaces and the lower body is scraped in sections with a sharp tool (ED 2654.13; fig. 6 b). This is a Middle Kingdom method of finishing a base and not a method used on bowls of the late Second Intermediate Period at Edfu. Another type of simple bowl found in this context is large Nile C bowls with modeled rims that often show rope impressions on the body. The distinctive modeled rim of ED 2733.4 (fig. 6 c) is a type of rim that does not appear in the late Second Intermediate Period – early 18th Dynasty contexts at Edfu.

Selection of closed vessels

Beakers

Beakers with thick, rounded bases (ED 2654.58; fig. 7 a) are made of Nile B2 fabric with a red slip on the exterior surface. Some of these bases were trimmed in sections with a sharp tool and not well smoothed, but others do show effort was made to smooth shallow trimming marks. When this method of trimming with a sharp tool is employed on beaker bases of the late 17th – early 18th Dynasty pottery deposited in the abandoned silos, the trimming motion was executed in long vertical/diagonal strokes⁴⁴. These beaker bases from the early Second Intermediate Period display short trimming strokes in multiple directions.

Bottles with corrugated neck

Bottles with tall corrugated and everted necks (ED 2654.73; fig. 7 c) are also found in the final abandonment layers. A series of closely spaced string impressions produced the corrugated neck.

⁴¹ This type was designated as »carinated dish« in Ayers 2016 and Moeller et al. 2011. Subsequently, the decision was made to simplify the ›cup – dish – bowl‹ shape categories to ›cup – bowl‹.

⁴² A few sherds of what appear to be the same or similar bowls were excavated from late Middle Kingdom layers. At not, these carinated bowls can be identified as very rare at Edfu in the late Middle Kingdom. No examples of these cups have been excavated from late Second Intermediate Period or early 18th Dynasty contexts.

⁴³ Wegner 2007, 235. 237 n. 21 fig. 99, 20–21. This bowl type at Edfu has the body contour of no. 20, but with a rolled rim, and the ring base of no. 21. Schiestl – Seiler 2012, 78–79 no. 2 (late S III–13th Dynasty). This type of bowl becomes frequent in the later 12th Dynasty and continues into the 13th Dynasty.

⁴⁴ For an example from Edfu of this later production method, see Ayers – Moeller 2012, fig. 7: ED 2547.1.

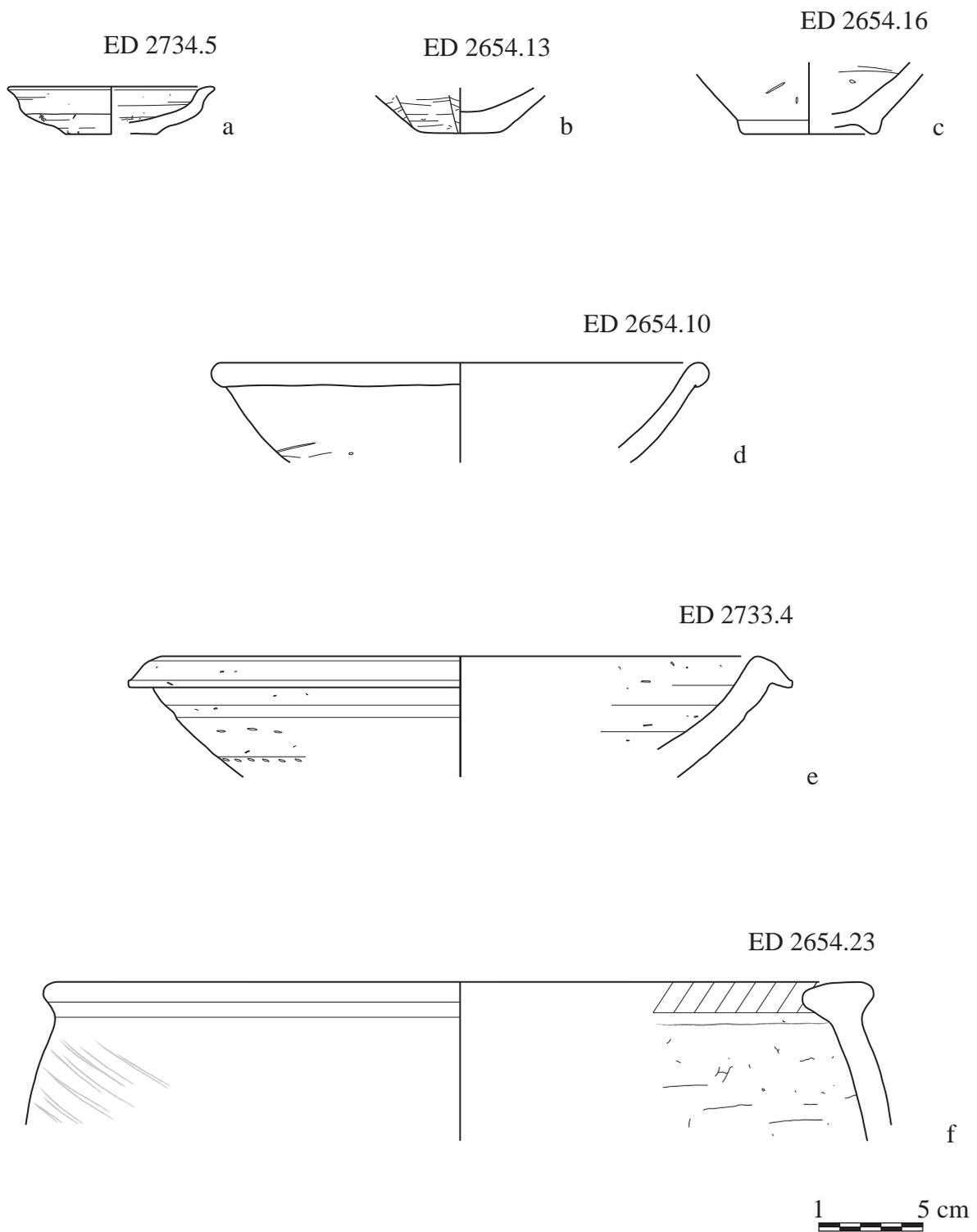


Fig. 6 Abandonment of north columned hall: selection of open vessels (1 : 3) (Drawing N. D. Ayers)

The rims are rolled with an internal slant and ED 2654.73 has a diameter of 13 cm. These bottles are made of Nile C fabric and a red slip covers the exterior surface and interior neck. This type of bottle with corrugated neck has parallels from Amenemhat III to the mid-13th Dynasty⁴⁵.

Jars with elongated direct rim

Jars with elongated and direct rim are found in the late Middle Kingdom (figs. 5 a–d) and early Second Intermediate Period at Edfu. Jar ED 2654.70 (fig. 7 b) has a straight direct rim and a diameter of 8 cm. It is made of Nile B2 coarse fabric and the surface is uncoated.

Jars with elongated externally thickened rim

Jars with an elongated and everted rim with a slightly thickened exterior (ED 2654.29; fig. 7 d) first appear in the final abandonment layers and have not been found in later contexts; therefore, the type appears to be restricted to the early Second Intermediate Period at Edfu. These jars are made of a highly fired Nile C fabric and the surface is uncoated. The diameter of ED 2654.29 is 10 cm.

Jar with rolled rim

A jar with rolled rim (ED 2654.8; fig. 7 e) is an example of the continuation of the Middle Kingdom tradition into the early Second Intermediate Period. The fabric is a Marl A3 that belongs to the classic Middle Kingdom version of this fabric type. This is not the sandy version of Marl A3 used for ED 2654.3 (see below).

Bottles with modeled rim

Bottles with a modeled rim that shows a slight indentation on the exterior and a tall cylindrical neck with prominent rilling lines first appear in the early Second Intermediate Period (ED 2654.3; fig. 7 f). This bottle type is a later evolution of the bottle with modeled rim from the abandonment of the southern columned hall belonging to the late 12th – early/mid-13th Dynasty (ED 2079.59; fig. 5 e). The early Second Intermediate Period bottle type shows a more pronounced indentation on the exterior rim than the late Middle Kingdom type⁴⁶. Moreover, this early Second Intermediate Period bottle type was produced in a sandy version of Marl A3 fabric with inclusions that seems comparable to Anne Seiler's Marl E9⁴⁷ fabric, as well as Teodozja Rzeuska's description of a Marl A3 variant (Marl A3b⁴⁸) with a high content of sand⁴⁹. The increase in sand found in the bottles of the early Second Intermediate Period when compared to those of the late Middle Kingdom mirrors Rzeuska's findings at Elephantine⁵⁰.

Parallels for the Edfu bottle come from Dra' Abu el-Naga⁵¹ and Elephantine⁵², all dating to the early Second Intermediate Period. The dating of this bottle in Moeller – Marouard – Ayers 2011 appears to have caused, perhaps unsurprisingly, some confusion. For example, concerning the author's use of the Elephantine bottle as a parallel, Alexander Ilin-Tomich writes, »Bauschichte[n] 12 and 11 are later and are datable to late Dynasty 13 – Dynasty 17« and »Thus, the ceramic

⁴⁵ Schiestl – Seiler 2012, 618–619.

⁴⁶ This indentation becomes even more pronounced in the bottles commonly found in the late Second Intermediate Period – early 18th Dynasty contexts at Edfu and other sites in Egypt. For examples, see Seiler 2005, 150 folding pl. 5, 3; Seiler 1999, 220–221 fig. 52, 2. The later bottles are found only in the late Second Intermediate Period – early 18th Dynasty contexts at Edfu and are only produced in Nile B2 fabric.

⁴⁷ Seiler 2005, 37. Marl E9 has the hardness, density and uniform green color of a Marl A3, but the inclusions of a Marl A4.

⁴⁸ Rzeuska 2012, 334.

⁴⁹ The marls from the final abandonment layer necessitate further detailed analysis.

⁵⁰ Rzeuska 2012, 353.

⁵¹ Seiler 2012, 150 folding pl. 5, 3 (early Second Intermediate Period).

⁵² Seiler 1999, 220–221 fig. 52, 1 (»Bauschicht 12«).

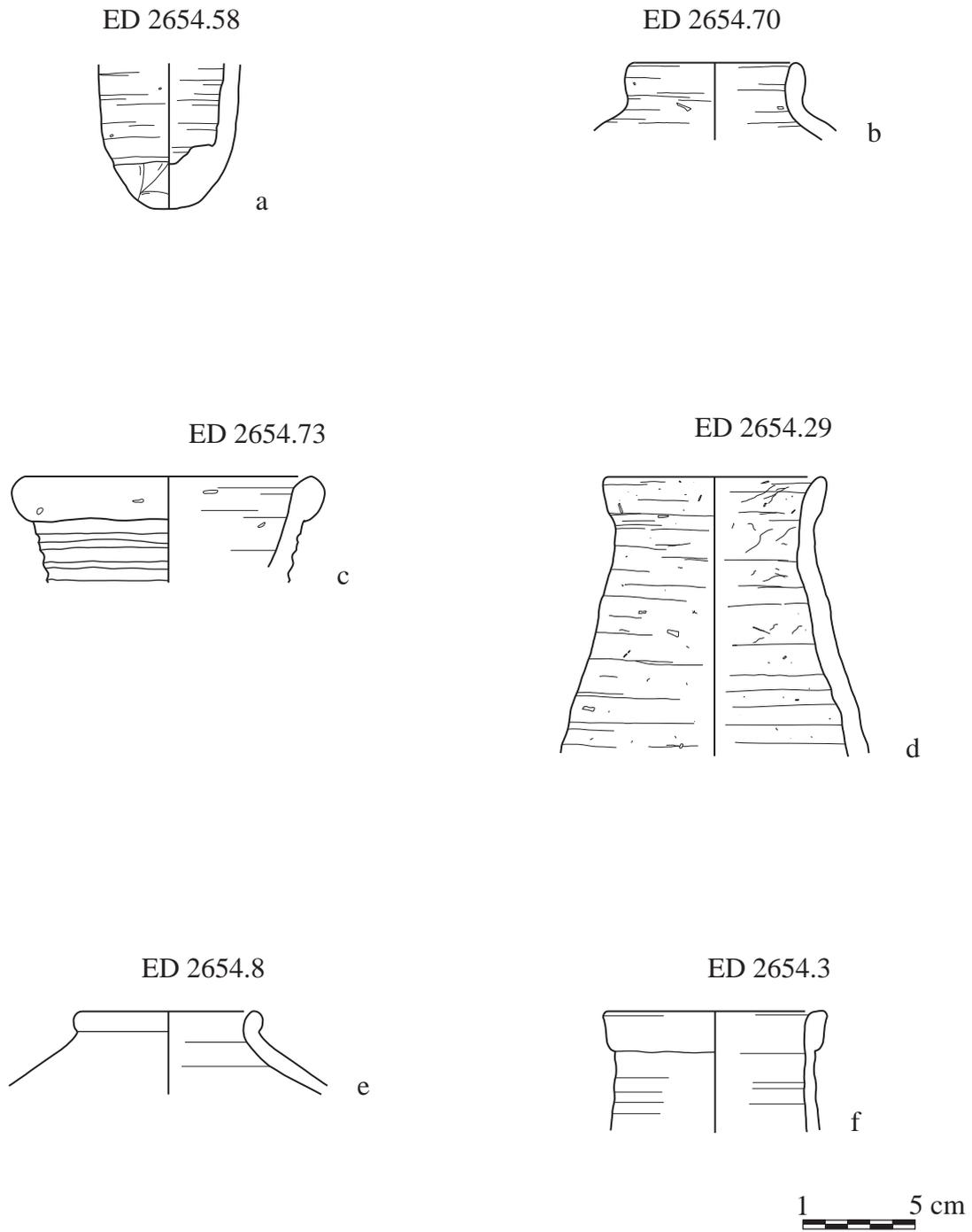


Fig. 7 Abandonment of north columned hall: selection of closed vessels (1 : 3) (Drawing N. D. Ayers)

material does not seem to support the author's conclusion, which is crucial for their chronological interpretation of the new findings ...⁵³. Ilin-Tomich's comments reveal a misunderstanding of the current dating of the »Bauschichten« at Elephantine and of the ceramic material. He refers to von Pilgrim's 1996 preliminary publication⁵⁴ where the dating of Bauschicht 11 and Bauschicht 12 are not in line with the current understanding of these phases. In fact, Bauschicht 11 belongs to the 17th Dynasty (including Dynasty 16) and Bauschicht 12 belongs to the 13th Dynasty (including the early Second Intermediate Period)⁵⁵. The Elephantine bottle and the Edfu bottle both belong to the early Second Intermediate Period.

Furthermore, in referring to the bottle with modeled rim, Ilin-Tomich writes, »One of the finds represents an Upper Egyptian Second Intermediate Period form that is unattested in Dynasty 13 contexts: a bottle with modeled rim«⁵⁶. The citation for his claim seems to refer to Anne Seiler's »bottles with moulded lips« which are of Nile B2 fabric and a later evolution of the Edfu bottle with modeled rim under discussion here⁵⁷. As stated in Moeller – Marouard – Ayers 2011⁵⁸ and Ayers 2016⁵⁹, bottles of this later type with modeled rim in Nile clay appear only in the late Second Intermediate Period – early 18th Dynasty contexts at Edfu, not in the early Second Intermediate Period. Marl bottles like ED 2654.3 only appear in the early Second Intermediate Period contexts and not in those later contexts.

Imported vessels

A restricted bowl (ED 2654.23; fig. 6 f) in Nile E is a vessel type that functioned as a cooking pot. This type of cooking pot is not an Upper Egyptian production as Nile E is a fabric from the north of Egypt⁶⁰. This cooking pot is handmade with a distinctive folded rim and white slip on the exterior surface and interior rim. Sherds of similar Nile E cooking pots are also known from late Middle Kingdom contexts at Edfu, but not from the late Second Intermediate Period – early 18th Dynasty fill layers in the silos. Those later contexts have only Nile B2 cooking pots of local production and Kerma cooking pots⁶¹.

Nubian vessels

Another type of restricted bowl found in the abandonment of the northern columned hall is the Nubian cooking pot. These bowls exhibit incised criss-cross decoration, an undecorated rim zone delineated by a horizontal incised line of varying depths, and direct rims. A large sherd from this context belongs to a cooking pot with incised, concentric circles on the base and criss-cross decoration on the body. This same base design has been found on Pan-Grave cooking pots in late Middle Kingdom contexts at Edfu and at Elephantine⁶². All of the Pan-Grave cooking pots are handmade in a coarse, highly friable fabric. The Nubian pottery found in the late Middle Kingdom and early Second Intermediate Period layers are immediately distinguishable from the cooking

⁵³ Ilin-Tomich 2014, 150.

⁵⁴ von Pilgrim 1996.

⁵⁵ A. Seiler, personal communication, Khyan Workshop, Vienna. July 2014. Many thanks to Anne Seiler for her helpful comments and clear explanation of the current understanding of the chronology of these so called Bauschichten at Elephantine.

⁵⁶ Ilin-Tomich 2014, 150.

⁵⁷ Seiler 2010, 44 fig. 10.

⁵⁸ Moeller et al. 2011, 119.

⁵⁹ Ayers 2016, 41.

⁶⁰ Nordström – Bourriau 1993, 175.

⁶¹ For an example of these later cooking pots, see Ayers – Moeller 2012, fig. 7: ED 2547.2.

⁶² For an example from a late Middle Kingdom context at Edfu, see Ayers – Moeller 2012, 107 fig. 4 a–b; 6: ED 2078. N1. For the example from Elephantine, see von Pilgrim 1996, 342–343 fig. 152 a.

pots of the Kerma culture, which are found in the late Second Intermediate Period – early 18th Dynasty contexts at Edfu⁶³.

**Pottery from an area of temporary occupation (post-southern columned hall;
pre-silo construction)**

An area of brief and temporary occupation (US 2543. US 2548) is evident at the southern end of the southern columned hall. This small area marked by successive mud floors and hearths is situated outside of and partially on top of the southern wall of the southern columned hall. This means the southern columned hall was abandoned and partially dismantled, including the removal of the columns, at the time of this temporary occupation. The majority of the pottery types, fabrics, and methods of production found during the excavation of this area are the same as those found in the early Second Intermediate Period layers of the final abandonment of the northern columned hall; therefore, very little time passed between the abandonment layers, the dismantling of the southern columned hall, and this area of temporary occupation. Even though there is significant overlap between the pottery from this context and the final abandonment of the northern columned hall, there are some types from the temporary occupation layers not found in the columned halls. Perhaps their absence from the columned hall corpus is due in part to the different activities that would have taken place in these two different spaces.

Selection of open vessels

Hemispherical cups

There is still some variety in the hemispherical cups in use at the same time during this period of temporary occupation. The most common type of hemispherical cup (ED 2548.10; fig. 1 f) has upper walls that turn out slightly and a red band at the rim. Rim diameters are typically 10 cm and the fabric is Nile B2 fine.

Shallow carinated bowls

The same type of shallow carinated bowl found in the final abandonment of the northern columned hall (fig. 6 a) is found in this area of temporary occupation (ED 2548.1; fig. 8 a). These Nile B2 bowls have everted rims, string-cut bases, and the lower body below the carination is scraped with a tool. Diameters are 10 to 10.5 cm and all of the small, shallow carinated bowls in this context have an uncoated surface. There is also a larger size of this type of carinated bowl in this context with diameters of approximately 14 cm and made of Nile B2 coarse fabric.

Simple bowls

One type of bowl with simple contour in this context shows continuation of the Middle Kingdom pottery tradition into the early Second Intermediate Period (ED 2543.9; fig. 8 c). This type has a rolled rim and a diameter of 25 cm. The fabric is Nile B2 and red slip covers the interior and exterior surfaces, which are both burnished. It is important to note, this burnishing is not pattern burnishing⁶⁴. Pattern burnishing is a method commonly found on pottery from the late 17th – early 18th Dynasty and this technique appears only on pottery found in the silo fill layers.

⁶³ For a discussion of the Kerma pottery found at Edfu, see Ayers – Moeller 2012, 111–115.

⁶⁴ Pattern burnishing is a method of unevenly burnishing a surface, which results in the darker lustrous areas of the burnishing strokes alternating with the matte and lighter colored unburnished areas.

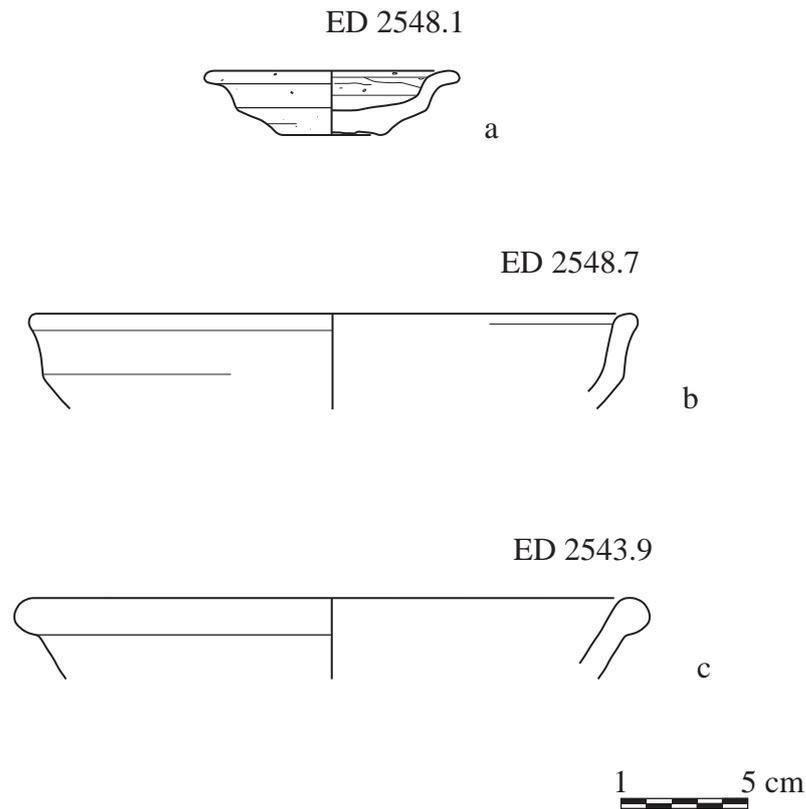


Fig. 8 Temporary occupation: selection of open vessels (1 : 3) (Drawing N. D. Ayers)

Carinated bowls

Among the carinated bowls from the temporary occupation context is a type with modeled rim (ED 2548.7; fig. 8 b). This bowl is made of Nile B2 fabric with a rim diameter of 24 cm. Both the interior and exterior surfaces are covered in thick red slip and the interior of the bowl is burnished (not pattern burnishing).

Selection of closed vessels

Jars

The jar rim shown in figure 9 a (ED 2543.7) is a type not found in the late Middle Kingdom or late Second Intermediate Period layers. The jar has an elongated and everted direct rim with a diameter of 10 cm. It is made of Nile C fabric and the surface is uncoated. This temporary occupation context also includes flat jar bases (ED 2543.12; fig. 9 c) in Nile C fabric. The bases are not scraped neatly with a sharp tool or string-cut, like the comparable jar bases from the late Second Intermediate Period – early 18th Dynasty contexts, and there are small nodules of unmixed clay visible on the bottom of the bases.

Bottle with modeled rim

The same type of bottle with modeled rim found in the abandonment layer of the northern columned hall (fig. 7 f) also appears in the area of temporary occupation (ED 2543.26; fig. 9 b). The modeled rim has a slight indentation on the exterior and a diameter of 11 cm. The tall cylindrical neck is not preserved. The marl fabric used does not appear to be the same Marl A3 variant used for the bottles in the final abandonment of the northern columned hall, but further study of the fabric is necessary. The surface of the bottle rim is well smoothed and uncoated.

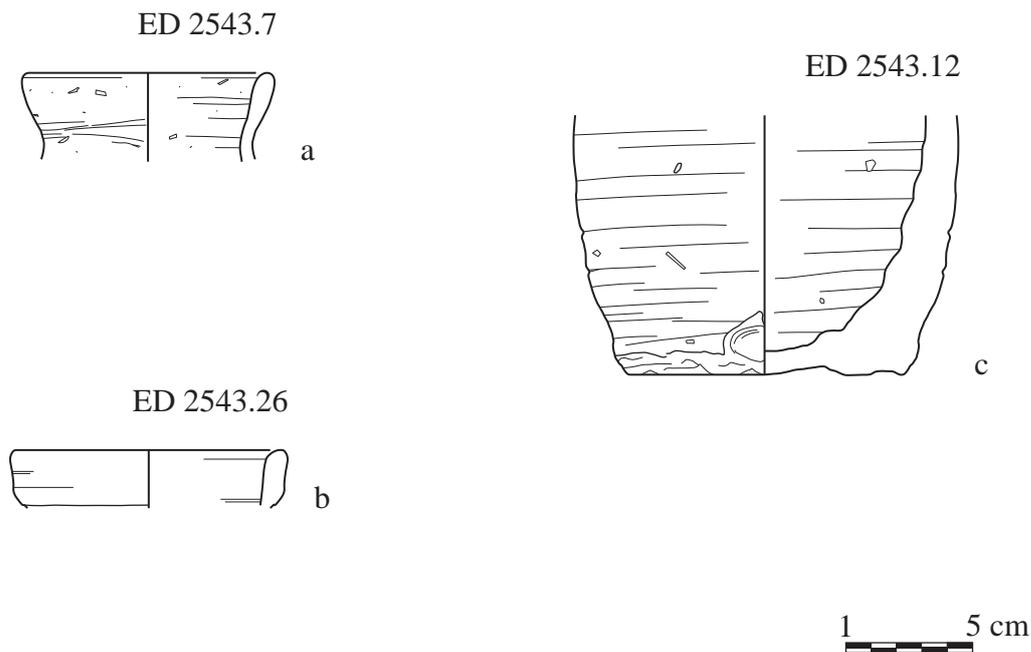


Fig. 9 Temporary occupation: selection of closed vessels (1 : 3) (Drawing N. D. Ayers)

Nubian vessels

The Nubian corpus is more diverse in this temporary occupation context⁶⁵. All sherds are hand-made and there are multiple fabric types, not only the coarse, highly friable fabric of the cooking pots from the previous contexts. Moreover, the incised decorative motifs are not limited to criss-cross decoration, but also include lattice decoration. Of note are the recessed rims with both well defined and not well defined burnished black-tops, which are characteristic of Pan-Grave culture.

Pottery from the second phase of silo construction

Following the dismantling of the administrative building complex and the brief period of temporary occupation, a large silo courtyard was built over the area. Multiple phases of silo construction are evident. One of the silos from the second phase of construction, Si 653, had a mud floor outside of and abutting the silo, meaning the floor was used in conjunction with this second phase of smaller silos. This pottery was found in an occupation layer (US 2659), rather than in a foundation trench or a fill layer. This means this context provides an accurate picture of the time period when the silos were constructed and functioning. The pottery found on the floor outside of Si 653 represents a clear break with the tradition characterizing the pottery from the columned halls. The continuation/evolution of the late Middle Kingdom pottery tradition has ended. This context represents a new ceramic tradition: the late Second Intermediate Period. When types that first appear in the late Middle Kingdom or early Second Intermediate Period do appear in the context of the silo courtyard, there are important changes (see below). A change in fabrics and production in this new tradition is marked by more highly fired Nile fabrics, in addition to the earliest example of Marl B at Edfu. The Marl B sherd is a handmade body sherd, possibly from a *zir*. Marl B is an Upper Egyptian fabric common in the late Second Intermediate Period and early 18th Dynasty

⁶⁵ The Nubian pottery from this context is currently under study by the author and Aaron de Souza, Macquarie University, Sydney.

and it is found frequently at Edfu in the pottery from the late Second Intermediate Period – early 18th Dynasty silo fill layers⁶⁶.

It is important to note the pottery from the time of the construction/use of the silos lacks many of the types, methods of production, and decoration associated with the pottery that spread across Egypt in the early 18th Dynasty. There is no pattern burnishing, no bases finished on the wheel, no black rims, or many other features present in the massive fill layers deposited inside the silos after they fell out of use. The pottery from the floor outside of Si 653 represents what precedes the more widely known late Second Intermediate Period – early 18th Dynasty corpus and it is the earliest context excavated (so far) within the beginnings of the late Second Intermediate Period tradition at Edfu.

Selection of open vessels

Hemispherical cups

Hemispherical cups with upper walls that turn out slightly (ED 2659.10; fig. 1 h) and inflected (s-shaped) upper walls are found in this context (ED 2659.13; fig. 1 g). The cups appear in Nile B2 fine fabric with diameters of 9 and 10 cm. All examples have a wide and messy red band at the rim.

Cups

Small cups with modeled rims and thin walls belong to a type not found in the early Second Intermediate Period corpus (ED 2659.1; fig. 10 a). The rounded bases are trimmed with a tool and the interiors are covered in a pale red slip. Cups of this type are made of Nile B2 fine fabric and the diameter for the cup in figure 10 a is 12 cm.

Simple bowls

Small bowls with simple contour and direct rims are another new addition to the Edfu late Second Intermediate Period corpus (ED 2659.6; fig. 10 b). These bowls have thin walls and scraped rounded bases. The fabric is Nile B2 and a pale red slip covers the interior surface and exterior of the rim. The bowls in figure 10 b has a diameter of 12 cm.

Another type of bowl with simple contour has a rolled rim and a shallow, recessed area below the rim (ED 2659.23; fig. 10 e). These Nile B2 bowls have a red slip and horizontal burnishing (not pattern burnishing) on the interior and exterior surfaces. This type of bowl is a later evolution of the late Middle Kingdom – early Second Intermediate Period bowls with rolled rims (ED 2654.10; fig. 6 d) and a precursor to the bowls from the silo fill layers belonging to the late Second Intermediate Period – early 18th Dynasty with a more triangular rim shape and a carination approximately at the point of where figure 10 e has a shallow, recessed area.

Carinated bowls

Several types of carinated bowls come from this context. Two of those types are small bowls with a carination high on the upper body and a direct rim (ED 2659.12; fig. 10 c) and medium sized bowls with direct rim (ED 2659.8; fig. 10 d). The small bowl has red slip on the interior and exterior surfaces and a diameter of 14 cm. The medium sized bowl has shallow string impressions on the exterior below the rim, a thick red slip covering the interior and exterior surfaces, and a diameter of 23 cm. Both types are made of Nile B2 fabric.

⁶⁶ Nordström – Bourriau 1993, 178–179.

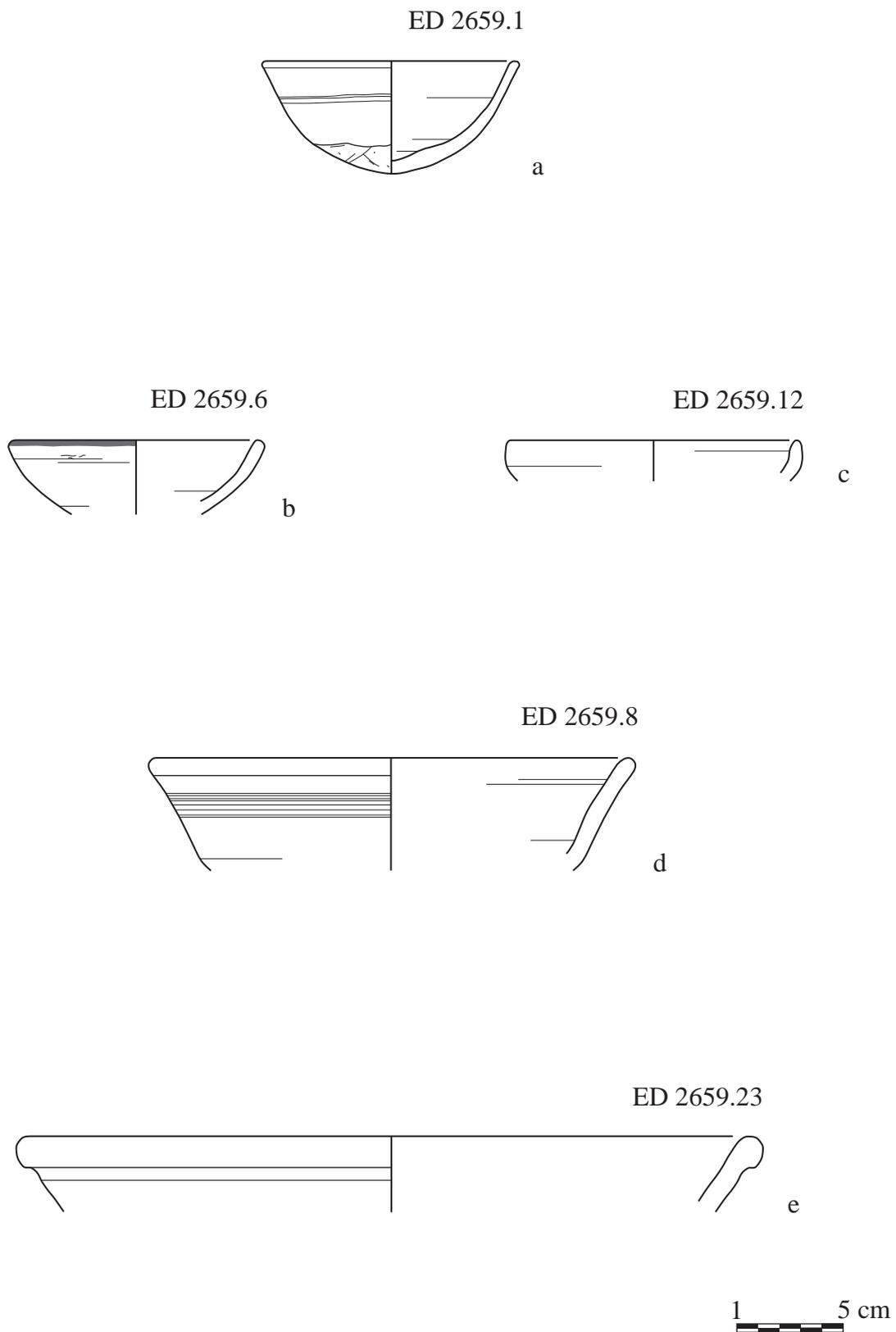


Fig. 10 2nd Phase of silo construction: selection of open vessels (1 : 3) (Drawing N. D. Ayers)

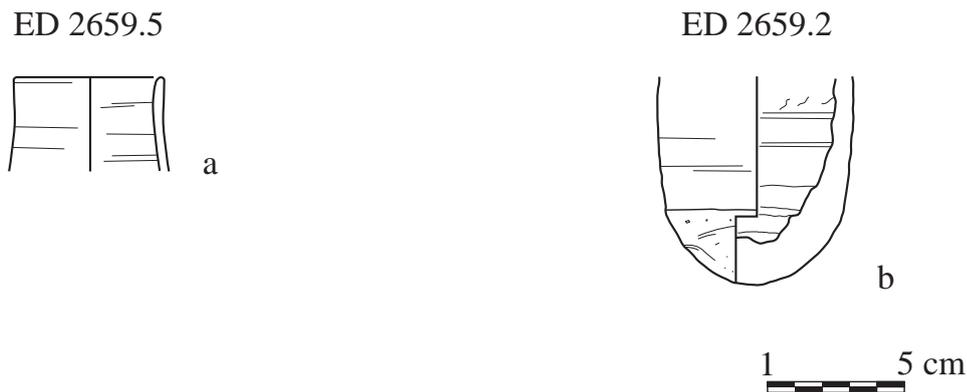


Fig. 11 2nd Phase of silo construction: selection of closed vessels (1 : 3) (Drawing N. D. Ayers)

Selection of closed vessels

Beakers

Beaker bases from the time of the use of the silos still have rounded bases finished by trimming with a tool (ED 2659.2; fig. 11 b). This shape and method of finishing continues to be found in the later silo fill layers, along with the later trimmed/scraped and well smoothed tapered bases⁶⁷. Beaker rims have an inflected contour and red slip on the exterior (ED 2659.5; fig. 11 a). The example in figure 11 a has a rim diameter of 5.5 cm. All of the beakers are made of Nile B2 fabric.

Nubian vessels

All of the Nubian pottery associated with the use of the silos are handmade cooking pots. Criss-cross incised decoration is the most common, but not the only decorative motif, and the fabrics are not limited to the coarse, highly friable fabric of the columned halls⁶⁸. A nearly complete cooking pot with recessed rim and a second horizontal incised line running below the rim comes from this context⁶⁹. The body is decorated with incised bands of three parallel lines that intersect other bands and form a lattice pattern. The base is decorated with a criss-cross pattern divided into three sections of unequal size across the base. The pottery from this context belongs to the Pan-Grave culture and is markedly different from the Kerma pottery dumped into the silos with the late Second Intermediate Period – early 18th Dynasty Egyptian pottery⁷⁰.

Concluding remarks

Hopefully, this discussion of the archaeological contexts alongside the associated pottery has demonstrated the implausibility of the pottery from the final abandonment of the northern columned hall, and thereby the sealings of Khyan, belonging to the late Second Intermediate Period. To summarize the findings presented here, when the southern columned hall fell out of use, an abundance of pottery, sealings, and other small finds were left behind. Most of that pottery corpus

⁶⁷ For an example from Edfu of this later production method, see Ayers – Moeller 2012, fig. 7: ED 2547.1.

⁶⁸ The Nubian pottery from this context is currently under study by the author and Aaron de Souza.

⁶⁹ Ayers – Moeller 2012, fig. 4 f–g; 109. 111 fig. 6: ED 2659.N.1.

⁷⁰ For the Nubian pottery from the construction and use of the silo courtyard, see Ayers – Moeller 2012, fig. 4 f–g; 109 fig. 6: ED 2659.N.1-3; 111 figs. 4–6. For the Nubian pottery from the silo fill layers, see Ayers – Moeller 2012, fig. 4 c–e; 111. 114–115 figs 8–9.

belongs to the late 12th – mid-13th Dynasty. The northern columned hall was in use for slightly longer and those final abandonment layers contained the sealings of Sobekhotep IV and the Hyksos ruler Khyan, as well as pottery from the early Second Intermediate Period. This pottery corpus is a continuation and evolution of the late Middle Kingdom tradition immediately preceding these final abandonment layers. Nothing about the vessel types, fabrics, or methods of production belong in the late Second Intermediate Period. Additionally, there is no long period of abandonment marked by layers of wind blown sand, no rubbish layers, no pits, no intrusions in the stratigraphy, or any other disturbance in the archaeological layers between the abandonment of the southern columned hall and the final abandonment of the northern columned hall that could make a late Second Intermediate Period date for Khyan plausible. Only after the final abandonment and dismantling of the administrative building complex, a brief period of temporary occupation, and following the construction of the large silo courtyard is it possible to identify pottery from the late Second Intermediate Period, which marks a distinctly different tradition in Upper Egypt.

Catalog

Abbreviations: diam. = diameter, pH = preserved height

Abandonment of southern columned hall		ED 2079.12 Bowl	fig. 2 b
ED 2079.50 Hemispherical cup	fig. 1 a	Rim diam.: 23.0 cm; pH: 4.8 cm Fabric: Nile B2 fine Description: Wheelmade, modeled rim, red slip on interior and exterior surfaces.	
Rim diam.: 13.0 cm; pH: 6.3 cm Fabric: Nile B1; surface: 7.5YR 6/3 light brown Description: Wheelmade, rounded base trimmed with a tool, direct rim, red band at the rim.			
ED 2079.34 Hemispherical cup	fig. 1 b	ED 2079.81 Bowl	fig. 2 d
Rim diam.: 11.0 cm; pH: 3.25 cm Fabric: Nile B1; surface: 7.5YR 6/3 light brown Description: Wheelmade, direct rim, red band at the rim.		Rim diam.: 25.0 cm; pH: 4.6 cm Fabric: Nile B2 Description: Wheelmade, modeled rim, red slip and burnishing on interior and exterior surfaces.	
ED 2079.89 Hemispherical cup	fig. 1 c	ED 2079.130 Bowl	fig. 2 e
Rim diam.: 10.0 cm; pH: 6.2 cm Fabric: Nile B1 Description: Wheelmade, direct rim, red band at the rim.		Rim diam.: 30.0 cm; pH: 3.5 cm Fabric: Nile C Description: Wheelmade, modeled rim, red slip on interior surface and exterior rim.	
ED 2079.39 Bowl	fig. 2 a	ED 2079.61 Cooking pot	fig. 3 a
Rim diam.: 17.0 cm; pH: 6.5 cm Fabric: Nile B2 Description: Wheelmade, rounded base finished with a tool and not well smoothed, direct rim, thick reddish-brown slip on interior and exterior surfaces, horizontal and vertical burnishing on interior surface.		Rim diam.: 42.0 cm; pH: 6.0 cm Fabric: Nile B2 coarse Description: Wheelmade, slightly restricted contour, direct rim, exterior rim flattened with a tool, three (preserved) incised horizontal lines on body, red slip on interior and exterior surfaces, soot/burning on most of exterior.	
ED 2079.23 Bowl	fig. 2 c	ED 2079.66 Bread mould	fig. 3 b
Rim diam.: 15.0 cm; pH: 4.6 cm Fabric: Nile B2 Description: Wheelmade, direct rim, a group of seven finely incised horizontal lines starting just below the rim, red slip on interior and exterior surfaces.		Rim diam.: 6.0 cm; pH: 9.4 cm Fabric: Nile C Description: Handmade, cylindrical body, thin and slightly everted rim, greyish-white firing skin on exterior surface, orange coating on interior surface.	

- ED 2079.68 Bread mould** **fig. 3 c**
 Base diam.: 2.5 cm; pH: 15.4 cm
 Fabric: Nile C
 Description: Handmade, cylindrical body, slightly rounded base shaped with fingers, greyish-white firing skin on exterior surface, thin brown coating on interior surface.
- ED 2079.36 Bread mould** **fig. 3 d**
 Base diam.: 2.4–2.6 cm; pH: 6.0 cm
 Fabric: Nile C; surface: 5Y 7/2 light gray; interior coating: 5YR 6/6 reddish yellow
 Description: Handmade, cylindrical body, nearly flat base, greyish-white firing skin on exterior surface, orange coating on interior surface.
- ED 2079.1 Beer bottle** **fig. 4 a**
 Rim diam.: 9.5 cm; pH: 6.3 cm
 Fabric: Nile C
 Description: Wheelmade, rim folded inward leaving a prominent indentation on the interior (>kettle mouth<), straight neck contour, reddish-brown slip on exterior surface.
- ED 2079.71 Beer bottle** **fig. 4 b**
 Rim diam.: 10.0 cm; pH: 6.9 cm
 Fabric: Nile C
 Description: Wheelmade, rim folded inward leaving a prominent indentation on the interior (>kettle mouth<), straight neck contour, red slip on exterior surface and part of interior rim.
- ED 2079.31 Beer bottle** **fig. 4 c**
 Rim diam.: 10.6 cm; pH: 11.2 cm
 Fabric: Nile C, very highly fired; surface: 2.5YR 5/6 red
 Description: Wheelmade, rim folded inward leaving a prominent indentation on the interior (>kettle mouth<), sloping neck contour, red-orange slip on exterior surface.
- ED 2079.32 Beer bottle** **fig. 4 d**
 Rim diam.: 12.0 cm; pH: 8.7 cm
 Fabric: Nile C, very highly fired; surface: 10YR 7/4 very pale brown
 Description: Wheelmade, rim folded inward leaving a prominent indentation on the interior (>kettle mouth<), sloping neck contour, red slip on exterior surface.
- ED 2079.77 Jar** **fig. 5 a**
 Rim diam.: 9.0 cm; pH: 3.8 cm
 Fabric: Nile C
 Description: Wheelmade, elongated and slightly everted direct rim, uncoated surface.
- ED 2079.78 Jar** **fig. 5 b**
 Rim diam.: 10.0 cm; pH: 4.1 cm
 Fabric: Nile C
 Description: Wheelmade, elongated and slightly everted direct rim, uncoated surface.
- ED 2079.7 Jar** **fig. 5 c**
 Rim diam.: 9.0 cm; pH: 3.4 cm
 Fabric: Nile B2
 Description: Wheelmade, elongated and straight rim with flattened top, uncoated surface.
- ED 2079.79 Jar** **fig. 5 d**
 Rim diam.: 9.0 cm; pH: 4.2 cm
 Fabric: Nile C
 Description: Wheelmade, elongated and slightly everted direct rim, uncoated surface.
- ED 2079.59 Bottle** **fig. 5 e**
 Rim diam.: 10.0 cm; pH: 2.5 cm
 Fabric: Marl A3; surface and fabric: 5Y 8/3 pale yellow
 Description: Wheelmade, modeled rim, well smoothed, uncoated surface.
- Final abandonment of northern columned hall**
- ED 2654.1 Hemispherical cup** **fig. 1 d**
 Rim diam.: 9.0 cm; pH: 6.1 cm
 Fabric: Nile B2 fine; surface: 10YR 5/3 brown
 Description: Wheelmade, rounded base trimmed with a tool, direct rim, red band at the rim.
- ED 2654.51 Hemispherical cup** **fig. 1 e**
 Rim diam.: 9.0 cm; pH: 6.1 cm
 Fabric: Nile B2 fine; surface: 10YR 5/3 brown
 Description: Wheelmade, direct rim, red band at the rim.
- ED 2734.5 Bowl** **fig. 6 a**
 Rim diam.: 10.0 cm; base diam.: 4.6 cm; pH: 2.3 cm
 Fabric: Nile B2
 Description: Wheelmade, carinated body, lower body scraped below carination with a tool, everted rim, uncoated surface.
- ED 2654.13 Bowl** **fig. 6 b**
 Base diam.: 4.0 cm; pH: 2.2 cm
 Fabric: Nile B2
 Description: Wheelmade, base scraped flat and lower body scraped in sections with a tool, red slip on interior and exterior surfaces.
- ED 2654.16 Bowl** **fig. 6 c**
 Base diam.: 7.0 cm; pH: 3.5 cm
 Fabric: Nile B2
 Description: Wheelmade, applied ring base, thick red slip on interior and exterior surfaces.

- ED 2654.10 Bowl** **fig. 6 d**
Rim diam.: 24.0 cm; pH: 4.9 cm
Fabric: Nile B2
Description: Wheelmade, rolled rim, thick red slip on interior and exterior surfaces, horizontal burnishing (not pattern burnishing) on entire interior surface and exterior rim.
- ED 2733.4 Bowl** **fig. 6 e**
Rim diam.: 32 cm; pH: 5.8 cm
Fabric: Nile B2 coarse
Description: Wheelmade, indentation on upper body, shallow rope impression on exterior, modeled rim, red slip on interior surface and top of rim.
- ED 2654.23 Cooking pot** **fig. 6 f**
Rim diam.: ca. 40.0 cm; pH: 7.7 cm
Fabric: Nile E
Description: Handmade, distinctive modeled rim, white slip on exterior surface and interior rim.
- ED 2654.58 Beaker** **fig. 7 a**
Base diam.: ca. 5.0 cm at start of trimmed area; pH: 6.5 cm
Fabric: Nile B2
Description: Wheelmade, base trimmed with a tool, recessed area above trimmed area, red slip on exterior surface.
- ED 2654.70 Jar** **fig. 7 b**
Rim diam.: 8.0 cm; pH: 3.4 cm
Fabric: Nile B2 coarse
Description: Wheelmade, elongated and straight direct rim.
- ED 2654.73 Bottle** **fig. 7 c**
Rim diam.: 13.0 cm; pH: 4.8 cm
Fabric: Nile B2 coarse
Description: Wheelmade, tall everted corrugated neck, rolled rim with internal slant, red slip on exterior surface and interior neck.
- ED 2654.29 Jar** **fig. 7 d**
Rim diam.: 10.0 cm; pH: 12.5 cm
Fabric: Nile C; surface: 5YR 5/4–6 reddish brown to yellowish red
Description: Wheelmade, elongated and everted rim with slightly thickened exterior, uncoated surface.
- ED 2654.8 Jar** **fig. 7 e**
Rim diam.: 8.5 cm; pH: 3.8 cm
Fabric: Marl A3; surface: 5Y 7/3 pale yellow
Description: Wheelmade, rolled rim, well smoothed, uncoated surface.
- ED 2654.3 Bottle** **fig. 7 f**
Rim diam.: 10.0 cm; pH: 5.4 cm
Fabric: Marl A3 variant (see discussion in text); surface: 5Y 8/3 pale yellow
Description: Wheelmade, tall cylindrical neck with prominent rilling lines, modeled rim with slight indentation on the exterior, well smoothed, uncoated surface.
- Temporary occupation (post-abandonment of southern columned hall; pre-silo courtyard)**
- ED 2548.10 Hemispherical cup** **fig. 1 f**
Rim diam.: 10.0 cm; pH: 3.7 cm
Fabric: Nile B2 fine
Description: Wheelmade, direct rim, red band at the rim.
- ED 2548.1 Bowl** **fig. 8 a**
Rim diam.: 10.0 cm; Base diam.: 4.5 cm; pH: 2.5 cm
Fabric: Nile B2
Description: Wheelmade, carinated body, lower body scraped with a tool below carination, string-cut base, everted rim, uncoated surface.
- ED 2548.7 Bowl** **fig. 8 b**
Rim diam.: 24.0 cm; pH: 3.8 cm
Fabric: Nile B2
Description: Wheelmade, carinated body, modeled rim, thick red slip on interior and exterior surfaces, burnishing (not pattern burnishing) on interior surface.
- ED 2543.9 Bowl** **fig. 8 c**
Base diam.: 25.0 cm; pH: 3.2 cm
Fabric: Nile B2
Description: Wheelmade, rolled rim, red slip and burnishing (not pattern burnishing) on interior and exterior surfaces.
- ED 2543.7 Jar** **fig. 9 a**
Rim diam.: 10.0 cm; pH: 3.5 cm
Fabric: Nile C
Description: Wheelmade, elongated and everted direct rim.
- ED 2543.26 Bottle** **fig. 9 b**
Rim diam.: 11.0 cm; pH: 2.1 cm
Fabric: Marl A (?) (see discussion in text)
Description: Wheelmade, modeled rim with slight indentation on the exterior, well smoothed, uncoated surface.
- ED 2543.12 Jar** **fig. 9 c**
Base diam.: 15.0 cm; pH: 10.3 cm
Fabric: Nile C
Description: Wheelmade, flat base not scraped with a tool or string-cut, small nodules of unmixed clay present on the bottom of the base, possible traces of red slip on exterior surface but obscured by burning.

Second phase of silo construction**ED 2659.13 Hemispherical cup****fig. 1 g**

Rim diam.: 9.0 cm; pH: 3.9 cm

Fabric: Nile B2 fine; surface: 7.5YR 6/4 light brown

Description: Wheelmade, direct rim, messy red band at the rim.

ED 2659.10 Hemispherical cup**fig. 1 h**

Rim diam.: 10.0 cm; pH: 3.5 cm

Fabric: Nile B2 fine; surface: 7.5YR 6/4 light brown

Description: Wheelmade, direct rim, messy red band at the rim.

ED 2659.1 Cup**fig. 10 a**

Rim diam.: 12.0 cm; pH: 5.3 cm

Fabric: Nile B2 fine

Description: Wheelmade, rounded base trimmed with a tool and not well smoothed, modeled rim, pale red slip on interior surface.

ED 2659.6 Bowl**fig. 10 b**

Rim diam.: 12.0 cm; pH: 3.5 cm

Fabric: Nile B2

Description: Wheelmade, direct rim, pale red slip on interior surface and top of rim.

ED 2659.12 Bowl**fig. 10 c**

Rim diam.: 14.0 cm; pH: 1.9 cm

Fabric: Nile B2

Description: Wheelmade, carinated body, direct rim, red slip on interior and exterior surfaces.

ED 2659.8 Bowl**fig. 10 d**

Rim diam.: 23.0 cm; pH: 5.3 cm

Fabric: Nile B2

Description: Wheelmade, carinated body, direct rim, shallow string impressions on exterior below rim, thick red slip on interior and exterior surfaces.

ED 2659.23 Bowl**fig. 10 e**

Rim diam.: 35.0 cm; pH: 3.6 cm

Fabric: Nile B2

Description: Wheelmade, rolled rim, shallow recessed area below the rim, red slip on interior and exterior surfaces, horizontal burnishing (not pattern burnishing) on interior and exterior surfaces.

ED 2659.5 Beaker**fig. 11 a**

Rim diam.: 5.5 cm; pH: 3.5 cm

Fabric: Nile B2

Description: Wheelmade, inflected contour, direct rim, red slip on exterior surface.

ED 2659.2 Beaker**fig. 11 b**

Base diam.: ca. 6.5 cm at start of trimmed area; pH: 7.7 cm

Fabric: Nile B2

Description: Wheelmade, straight walls, thick rounded base trimmed with a tool and smoothed, red slip on exterior surface.

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Daphna Ben-Tor

The Sealings from the Administrative Unit at Tell Edfu Chronological and Historical Implications

The recently discovered administrative building complex at Tell Edfu yielded a large group of clay sealings bearing scarab impressions, most of them displaying distinctive designs and inscriptions of late Middle Kingdom scarabs¹. This find is basically consistent with other late Middle Kingdom administrative units in Egypt and Lower Nubia, where thousands of clay sealings reflect the use of scarabs as the primary and most common sealing device for the central administration during this period². The standard designs appearing on these sealings are identical throughout the Nile valley³, indicating they were made by scarabs manufactured in a central workshop, most probably at the residence in the Lisht-Memphis region⁴. This is supported by the standard features shared by scarabs bearing these designs, which characterize also late Middle Kingdom royal-name and private-name scarabs, primarily of the 13th Dynasty⁵.

Unlike other late Middle Kingdom administrative units in Egypt and Lower Nubia, the Tell Edfu sealings include also examples made by scarabs that clearly postdate the time span of the central administration of the late Middle Kingdom which is generally dated between ca. 1850–1700 B.C.⁶. This is indicated by impressions made by scarabs bearing the name of the Hyksos Khyan⁷ and a Canaanite scarab stylistically assigned to the late Palestinian series⁸, both dating to the Second Intermediate Period. The contexts that yielded these Second Intermediate Period sealings yielded also examples displaying clear late Middle Kingdom characteristics⁹ including sealings made by private-name scarabs¹⁰, and a royal-name scarab of Sobekhotep IV¹¹. This 13th Dynasty ruler was dated based on his position in the Turin King List and on contemporary monuments to the last quarter of the 18th century B.C. between ca. 1732–1720¹².

Considering the ceramic assemblages associated with these sealings, which display typical Upper Egyptian pottery of the late Middle Kingdom, the excavators suggested a possible overlap between the 13th and 15th Dynasties, and argued for considerably reducing the generally suggested chronological gap of at least 100 years between Sobekhotep IV and Khyan¹³. This assumption has implications on the chronological definition of the Second Intermediate Period, which challenges the generally accepted chronological range of this period.

¹ Moeller et al. 2011, 100–106.

² Ben-Tor 2007a, 5–9 with previous bibliography; Wegner 2007, 299–315.

³ Ben-Tor 2007a, 10–35, and pls. 1–20.

⁴ Ben-Tor 2007a, 5–6.

⁵ Ben-Tor 2007a, 36–41, and pls. 21–29.

⁶ Quirke 2004, 171.

⁷ Moeller et al. 2011, fig. 11, 1

⁸ Moeller et al. 2011, fig. 12, 3, and cf. Ben-Tor 2007a, pl. 102.

⁹ Moeller et al. 2011, fig. 13, 7–11.

¹⁰ Moeller et al. 2011, fig. 12, 4–6.

¹¹ Moeller et al. 2011, fig. 11, 2.

¹² Ryholt 1997, 197 tab. 36.

¹³ Moeller et al. 2011, 107–109.

The historical and archaeological definition of the early Second Intermediate Period in the region of Upper Egypt is still not entirely clear. Nevertheless, recent studies of ceramic assemblages of the Middle Kingdom and the Second Intermediate Period in Egypt and Lower Nubia have established a typological sequence that allows determining the relative and sometimes the absolute dates of occupation levels at many relevant sites¹⁴. The evidence provided by these studies is still limited to broad definitions of periods and it does not always allow precise dating in terms of years. It offers however, criteria to distinguish early and late Middle Kingdom and early and late Second Intermediate Period deposits at many relevant sites, while pointing out regional differences. It also contributed significantly to the synchronization of the Middle Kingdom and Second Intermediate Period in Egypt with the Middle Bronze Age phases in the Levant, based primarily on the mixed ceramic assemblages at Tell el-Dab^ca¹⁵.

It is the evidence provided by these studies which made it possible to establish a reliable chronological typology of scarabs of the first half of the 2nd millennium B.C. in Egypt and the Levant. Recent studies of scarabs of this period demonstrate the clear distinction between early and late Middle Kingdom scarabs, Middle Kingdom and Second Intermediate Period scarabs, Egyptian and Canaanite scarabs, and early and late Canaanite scarabs¹⁶. The aim of this paper is to show that the stylistic scarab typology based on the archaeological contexts of scarabs and seal impressions of these periods in Egypt and in the Levant strongly argues against revising the traditionally suggested chronological gap between Sobekhotep IV and Khyan.

It is generally accepted that the Second Intermediate Period began with the takeover of the eastern Delta by the Canaanite settlers in the region and the subsequent division of the land¹⁷. The evidence at Tell el-Dab^ca argues for assigning this development to level F at the site, which was dated within the range of the late 18th and early 17th century B.C. (ca. 1710–1680) according to the low chronology used by Manfred Bietak¹⁸. This date is based on the studies of Egyptian ceramic assemblages noted above, which are largely accepted by experts of Egyptian pottery¹⁹. The most significant event that marks the end of the Middle Kingdom is the abandonment of the capital Itj-tawy by the late rulers of the 13th Dynasty. Precise dating of this event is still speculative, yet, the last 13th Dynasty ruler with inscribed monuments in both Upper and Lower Egypt is Merneferre Ay, whose reign is dated between ca. 1701–1677 B.C., and it was suggested that he was probably the last 13th Dynasty ruler who controlled all of Egypt²⁰. It was also argued however, that the inscription on the funerary stela of Horemkhauef who was sent to the residence Itj-tawy to collect two temple statues from the royal workshop, argues for the continuing function of the residence at Itj-tawy at least 15 years after the reign of Merneferre Ay²¹. Although the exact date of the collapse of the Middle Kingdom is still uncertain, indications for the weakening and subsequent disintegration of the central rule sometime between the late 18th and early 17th century B.C. are provided by ceramic assemblages associated with the abandonment of royal funerary cults at Dahshur, south Abydos and el-Lisht, and the end of Egyptian control of Lower Nubia²². Further significant developments at that time are indicated in the changes of trade patterns between Egypt and the Levant. Archaeological evidence from both regions argues for the coinciding of the end of trade contacts between Egypt and Byblos and the beginning of trade contacts between Egypt

¹⁴ Arnold 1972; Arnold 1977; Arnold 1982; Arnold 1988; Bourriau 1981; Bourriau 1987; Bourriau 1990; Bourriau 1991; Bourriau 1997; Bourriau 2010; Bourriau – Quirke 1998; Seidlmayer 1990; Bietak 1984; Bietak 1989; Bietak 1991; Smith 1995, 53–69, 75–79; Bader 2001; Aston 2004; Seiler 2005; Seiler 2010.

¹⁵ Bietak 1991; Ben-Tor 2003; Bietak et al. 2008; Bietak – Kopetzky 2012.

¹⁶ Ben-Tor 1997; Ben-Tor 1998; Ben-Tor 2003; Ben-Tor 2004a; Ben-Tor 2007a; Keel 2004.

¹⁷ Bietak 1997, 105–109; Bietak 2010, 151–52; Bourriau 2000, 185–86; Bourriau 2010, 13.

¹⁸ Bietak 1997, 108–109; Bietak 2010, fig. 1.

¹⁹ See n. 13 above.

²⁰ Bourriau 2000, 185; Quirke 2004, 172.

²¹ Bourriau 2000, 198–199.

²² Ben-Tor 2004a, 28–29; Ben-Tor 2007a, 43–45 with bibliography.

and Palestine sometime between the late 18th and early 17th century²³. The last Middle Kingdom Pharaoh attested at Byblos is Ibiaw Wahibre of the 13th Dynasty who ruled just before Merneferre Ay and is dated to the last decade of the 18th century B.C. between ca. 1712–1701 B.C.²⁴. According to the Turin King List, Merneferre Ay is the fourth ruler following the reign of Sobekhotep IV who is dated between ca. 1732–1720 B.C.²⁵.

The early 17th century B.C. saw the initial production of locally produced scarabs in Palestine in contexts assigned to the early MBIIB²⁶. The early 17th century date of this archaeological phase is based primarily on the equivalence of the ceramic assemblages at Tell el-Dab^ca and Ashkelon on the southern Palestinian coast²⁷. The comparison of the Canaanite pottery at both sites confirmed the evidence at Tell el-Dab^ca indicating that the end of the Middle Kingdom in Egypt coincides with the end of the MBIIA in the Levant²⁸. MBIIA occupation levels in the Levant yielded Egyptian imports almost exclusively in the northern Levant, primarily at Byblos on the Lebanese coast, where a significant number of Egyptian Middle Kingdom scarabs was found. In contrast, Egyptian imports are extremely rare in MBIIA levels in Palestine, with the exception of isolated pottery items and scarabs, and a unique find of local clay sealing stamped by late Middle Kingdom scarabs at Ashkelon²⁹. The beginning of the MBIIB in this region, however, saw the initial mass production of locally made scarabs, most of them found in local tombs where they were used as funerary amulets³⁰.

The stylistic profile of these scarabs which were classified as the early Palestinian series is clearly inspired by Egyptian scarabs of the late Middle Kingdom, but unlike the Egyptian prototypes the early Canaanite scarabs frequently display pseudo hieroglyphs and misrendered signs³¹. They also display very distinctive features which make it easy to distinguish them from other groups³², and they are found almost exclusively in Palestine. The ceramic assemblages from the early MBIIB archaeological contexts that yielded these scarabs correspond to Tell el-Dab^ca levels F and E/3 and were therefore dated between ca. 1700–1650 B.C., though the production of some types probably continued to the end of the 17th century B.C. The scarabs assigned to the late Palestinian series display in addition to imitations of Egyptian Middle Kingdom designs also designs inspired by the Levantine cultural sphere³³. They also display distinctive stylistic features which differ from those of the early series³⁴. The late Palestinian series were found in contexts dated to more advanced phases of the MBIIB corresponding to Tell el-Dab^ca levels E/2–D/2 which are assigned to the Hyksos Period and are dated between ca. 1650–1530 B.C.

Christa Mlinar who published the Tell el-Dab^ca scarabs divided them into six types based on their stylistic profile and showed the stratigraphic distribution of each type³⁵. The scarabs assigned to her type IV display distinctive characteristics of the late Palestinian series and were categorized by Mlinar as 'The Palestinian Group'³⁶. The Palestinian origin of Mlinar type IV scarabs is supported by the evidence indicating large-scale importation of late Palestinian type scarabs into Egypt during the Hyksos Period³⁷. The stratigraphic distribution of Mlinar type IV scarabs at Tell

²³ Ben-Tor 2007a, 119. 186–187; Ben-Tor 2007b, 182.

²⁴ Ryholt 1997, 197 tab. 36.

²⁵ See previous note.

²⁶ Ben-Tor 2007a, 117–121.

²⁷ Bietak et al. 2008.

²⁸ Bietak 2010, 140 fig. 1.

²⁹ Ben-Tor 2007a, 117–121.

³⁰ See previous note.

³¹ Ben-Tor 1997; Ben-Tor 2007a, 122–150, and pls. 50–63; Ben-Tor 2009.

³² Ben-Tor 2007a, 151–153, and pls. 64–73.

³³ Schroer 1985; Schroer 1989; Keel 1995, 218–226.

³⁴ Ben-Tor 2007a, pls. 106–107.

³⁵ Mlinar 2004.

³⁶ Mlinar 2004, 122–128.

³⁷ Ben-Tor 2007a, 190–192.

el-Dab^ca is between levels E/2–D/2, the great majority of examples coming from levels E/1 and D/3 which are dated between ca. 1620–1560 B.C. The Canaanite scarab used for the Edfu sealings displays a distinctive late Palestinian series design, which is not attested in Palestine or Tell el-Dab^ca earlier than 1650 B.C.³⁸

The known corpus of scarabs bearing the name of the Hyksos Khyan did not include until recently items from clear archaeological contexts, hence the disagreements over the absolute dates of his reign and his position in the 15th Dynasty. The exceptions are the recently found seal impressions from Tell Edfu and Tell el-Dab^ca bearing Khyan's name³⁹. The Tell el-Dab^ca impressions were found in association with a palatial building complex of Near Eastern architectural style. The palace is assigned to occupation levels dated between the middle and late Hyksos Period and is attributed to Khyan based on the seal impressions bearing his name. Eight of these seal impressions were found in contexts dated to the early part of the late phase of the palace which was assigned to level D3 (dated ca. 1590–1560). One of the sealings may have originated in the early phase of the palace assigned to level E1 (dated ca. 1620–1590), thus the sealings suggest a date in the mid Hyksos Period between ca. 1600–1560 B.C.⁴⁰. It is important to note here that as in the case of Tell Edfu, the Khyan sealings at Tell el-Dab^ca were found among sealings made by Canaanite scarabs of the late Palestinian series and Egyptian scarabs of the late Middle Kingdom, including private-name and royal-name scarabs of Sobekhotep III and Neferhotep I of the 13th Dynasty⁴¹. Dating the context of the Khyan sealings at Tell Edfu is more problematic. However, the ceramic assemblages associated with them argue for placing Khyan in the earlier rather than later Hyksos Period.

It is generally agreed that Khyan was one of the six Hyksos rulers of Manetho's 15th Dynasty. There is however insufficient evidence to establish his exact position within this dynasty. Stylistic analysis of the scarabs bearing his name strongly argues for placing him as one of the early 15th Dynasty rulers⁴². This is now supported by the contexts of sealings at Tell Edfu, which confirm Khyan's date before the late 17th Dynasty and strongly argue against placing him as the immediate predecessor of Apophis as previously suggested by some scholars⁴³. This is also indicated by the contexts of the Tell el-Dab^ca sealings. Nevertheless, the attempts of the Tell Edfu excavators to raise the date of Khyan close to that of Sobekhotep IV of the 13th Dynasty is problematic and is strongly contradicted by the archaeological contexts of scarabs and seal impressions of the Middle Kingdom and Second Intermediate Period in Egypt and the Levant.

William Ward presented convincing evidence for placing Khyan as one of the early Hyksos rulers based on his stylistic typology of Second Intermediate Period royal-name scarabs⁴⁴. As already noted above, the exact position of Khyan within the 15th Dynasty is unclear. If the palace associated with the Khyan's sealings at Tell el-Dab^ca indeed dates from his reign it is difficult to date Khyan earlier than 1600 B.C., which suggests at least 120 years between him and Sobekhotep IV. Even if Khyan is the first ruler of the 15th Dynasty, the evidence at Tell el-Dab^ca would associate his reign with level E/2 which is dated between 1650–1620 B.C. As for the late Palestinian series, scarabs assigned to this category first occur in MBIIB levels that yielded pottery assemblages with best parallels in level E/2 at Tell el-Dab^ca, thus arguing for 1650 B.C. as their earliest possible date. If we consider the earliest possible date of 1650 for the Khyan and Canaanite scarab used for the Edfu sealings, the chronological gap between Khyan and Sobekhotep IV cannot be

³⁸ See above n. 8.

³⁹ For the Tell el-Dab^ca sealings see Bietak 2011; Bietak et al. 2012/1013; Sartori 2009.

⁴⁰ Bietak et al. 2012/2013, 25–26.

⁴¹ See Sartori 2009 for the late Middle Kingdom sealings. I am grateful to Manfred Bietak for showing me photographs of the sealings associated with the Khyan palace at Tell el-Dab^ca, which included examples made by late Middle Kingdom as well as late Canaanite scarabs.

⁴² Ward 1984, 162–168; Ben-Tor 2007a, 104–110; Ben-Tor 2010. The typologies suggested by Krauss (1998) and Ryholt (1997, 40–50; Ryholt 2010) are seriously challenged by the archaeological evidence.

⁴³ See Ryholt 1997, 118–125.

⁴⁴ Ward 1984, 162–168.

less than 80 years. It must be emphasized however that this early date is highly unlikely considering the contexts of the Khyan sealings at Tell el-Dab^ca and the distribution of late Canaanite scarabs at that site.

As for the royal-name scarabs of Sobekhotep IV, they display the most distinctive features of the so-called Sobekhotep group scarabs of the 13th Dynasty⁴⁵. This group includes royal-name scarabs of seven or eight kings from Sobekhotep III through Merneferre Ay⁴⁶. Based on the place of these rulers in the Turin King List Kim Ryholt dated them between 1749–1677 B.C., with Sobekhotep IV between 1732–1720 B.C.⁴⁷. The features of the Sobekhotep group royal-name scarabs appear also on the great majority of late Middle Kingdom private-name scarabs and on many design scarabs of this period⁴⁸. The archaeological evidence from Second Intermediate Period sites in Egypt and lower Nubia indicates that the production of late Middle Kingdom type scarabs did not continue after the abandonment of the Middle Kingdom residence Itj-tawy in the early 17th century B.C.⁴⁹. It also indicates that the central administration of the late Middle Kingdom comes to an end after this event. The Middle Kingdom practice of using scarabs as the primary sealing device for the central administration does not continue into the Second Intermediate Period⁵⁰. The sealings found in Second Intermediate Period contexts at Tell el-Dab^ca and Tell Edfu are exceptional and most probably reflect local continuation of the late Middle Kingdom administrative units at these sites. This is indicated by the large number of late Middle Kingdom scarabs used for the sealings at both sites, which shows continuing use of the scarabs previously used at these sites for the late Middle Kingdom central administration.

Finding seal impressions made by significantly earlier scarabs is not surprising as it is consistent with the customary use of earlier scarabs both as amulets and as seals in almost every group found in Egypt and the Levant. To mention just a few examples, Tell el-Dab^ca yielded sealings made by late Middle Kingdom and Second Intermediate Period scarabs in contexts dating to the Tuthmosid Period⁵¹. As noted above, the palatial complex assigned to Khyan at Tell el-Dab^ca yielded in addition to the Khyan sealings, sealings made by late Middle Kingdom design, private-name and royal-name scarabs⁵². A scarab of a 13th Dynasty queen Nehit associated with the so-called Sobekhotep group was found in level D/3 of the late Hyksos Period at Tell el-Dab^ca⁵³, and a scarab of Sobekhotep IV was found in the same context as scarabs of the late Hyksos Period at Tell el Maskhuta⁵⁴. In fact, the only excavated group of scarabs that did not include a single heirloom comes from the foundation deposits of Hatshepsut's mortuary temple at Deir el-Bahri⁵⁵. Almost all other groups whether comprising scarabs or seal impressions in Egypt or the Levant include examples earlier than the contexts in which they were found⁵⁶.

The initial mass production of scarabs in Egypt took place in the late 12th Dynasty, and scarabs were used as the primary sealing device for the central administration for the entire duration of the late Middle Kingdom⁵⁷. It is therefore not surprising that during this period the great majority of the seal impressions display late Middle Kingdom designs or inscriptions. Yet, even during the

⁴⁵ Ben-Tor 2007a, 3841, and pls. 21–27.

⁴⁶ Ward 1984, 156–159; Ben-Tor 2007a, 38–39, and pls. 21–22.

⁴⁷ Ryholt 1997, 197 tab. 36.

⁴⁸ Ben-Tor 2007a, 39–41, and pls. 22–27.

⁴⁹ Ben-Tor 2007a, 43–71.

⁵⁰ Ben-Tor 2007a, 45–48.

⁵¹ Bietak 2004.

⁵² Sartori 2009.

⁵³ Mlinar 2004, 110 fig. 2, 3.

⁵⁴ Ben-Tor 2007a, Appendix pl. 1, 11.

⁵⁵ Roehrig 2005, 141–144. I am grateful to Catharine Roehrig at the MMA for making these scarabs available to me and for her permission to work on their forthcoming publication.

⁵⁶ Keel 1995, 262–263 §692; see e.g. Ben-Tor 1994; Ben-Tor 2007a, 1. 6–7. 49–52. 66–69. 72.

⁵⁷ Ben-Tor 2007a, 5–9.

late Middle Kingdom, sealings made by early Middle Kingdom scarabs are occasionally found⁵⁸. The situation changes significantly in the Second Intermediate Period, when scarabs are no longer used as seals for the central administration. In the exceptional cases of Tell el-Dab^ca and Tell Edfu, where the use of scarabs for sealing continues in the local administration, the evidence clearly shows that the scarabs used for the sealings were primarily late Middle Kingdom scarabs, indicating continuing use of the scarabs used for the Middle Kingdom administration at these sites. This is also true in the case of the sealings found in Tuthmosid contexts at Tell el-Dab^ca. It should also be noted that royal-name scarabs were not used as official seals during any period, including the Middle Kingdom⁵⁹. The sealing made by the Sobekhotep IV royal-name scarab therefore does not differ from all other late Middle Kingdom sealings found at Edfu and should not be considered as reflecting the reign of this king.

Considering all the above, it is a methodological oversight to draw chronological conclusions based on the existence of scarabs or seal impressions of different periods in the same archaeological context. It is now generally agreed that scarabs can determine no more than the *terminus post quem* of the context in which they were found, but dating the context must be based primarily on ceramic assemblages. As stated by the excavators of Tell Edfu there are indications that the northern columned hall where the Second Intermediate Period examples were found continued in use slightly longer than the southern one. This is based on the Second Intermediate Period type sealings as well as on particular pottery forms, which are absent in the southern hall.

The Tell Edfu pottery associated with the Second Intermediate Period sealings is of great importance as in addition to confirming Khyan's position as one of the earlier Hyksos rulers, it clearly indicates the continuation of late Middle Kingdom type pottery in Upper Egypt well into the Second Intermediate Period. This is one of the most important contributions of the Tell Edfu discovery considering the state of our knowledge of the early Second Intermediate Period in Upper Egypt. Another significant contribution of the Tell Edfu discovery is the evidence it provides for commercial contacts between Tell Edfu and Tell el-Dab^ca, which may suggest possible commercial contacts of the Hyksos capital with other Upper Egyptian sites.

Finally, only analysis of the clay used for the Second Intermediate Period sealings at Tell Edfu will determine if the sealings were originally attached to containers sent from Tell el-Dab^ca, or if scarabs coming from the north were used for locally made sealings.

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⁵⁸ See e.g. Ben-Tor 2007a, 10–11. 16. 18 n. 45; 22–23. 28.

⁵⁹ Ben-Tor 2004b.

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King Khyan and Avaris

Some Considerations Concerning Khyan Seal Impressions from Area R/III at Tell el-Dab^ca

1 Introduction¹

Several sealings bearing the name of the Hyksos king Khyan have been found in Tell el-Dab^ca/ancient Avaris during recent excavations in area R/III. This area is situated east of the modern village of 'Ezbet Rushdi (es-Saghira) (fig. 1). A magnetometry survey and three excavation campaigns conducted from 2010 to 2012 investigated and uncovered approximately 2,400 m² of a settlement district of the ancient city here² (fig. 2). Thanks to intensive sieving, it was possible to recover a remarkable quantity of administrative material. Unstamped lumps of clay still bearing the impressions of the sealed objects represent the main group; stamped clay sealings³ form the second largest group (more than 1,200 examples), and scarab seals⁴ and further administrative material (tokens, *bullae*, clay sticks, numerical tablets) constitute the two less common assemblages.

Eleven *cretulae*⁵ found in area R/III show impressions bearing royal names, specifically ten sealings dating to the Second Intermediate Period⁶ – nine of Khyan and one of a king whose throne name is Khawoserra – and one sealing attesting the co-regency of Amenemhat III and Amenemhat IV⁷. This article will focus on the seal impressions of Khyan, which will be evaluated according to their typology, stratigraphic position, ceramic context⁸ and their relation to other

¹ The royal seal impressions presented in this article, along with the other sealings, scarab seals and administrative material found in the area R/III are the object of the PhD research of one of the authors, Chiara Reali, at the University of Vienna. We would like to thank Daphna Ben-Tor, Claus Jurman and Kim Ryholt for their advice and help, Vera Michel for the information about the complete ceramics from area R/III and Pamela Rose for editing our English.

² Forstner-Müller – Rose 2012/2013, 55–66; Forstner-Müller et al. 2015.

³ To which will be referred here also as *cretulae*. For the different terms used as synonym for »sealing«: Fiandra – Frangipane 2007, 16–23; Keel 1995, 116–117.

⁴ In addition to the group of 47 scarab seals, to which belong both incised and unfinished scarabs, there is a single example of an incised stamp seal.

⁵ The documentation of the administrative material from the eastern side of the area has been delayed, but will be resumed. Thus, the number of sealings with royal impressions may increase in the future.

⁶ The previously-suggested reading of the cartouche impressed on a sealing from R/III (inv. 9467) as *ꜥ3-wsr-rꜥ* (Reali 2012/2013, 70–71) and the subsequent attempt to attribute this sealing to king Apophis (Reali 2012/2013, 70–71) may have to be revised, as suggested during the workshop in Vienna by several of the participants, to read it more cautiously as *(s?)wsr n rꜥ*.

⁷ The 13th Dynasty features displayed on this kind of seal impression and on further examples of the same design on scarabs (Tufnell 1984, pl. 53, 3091. 3092; Ben-Tor 2007, pl. 20, 39. 40), may indicate that they are actually posthumous (Ben-Tor 2007, 38).

⁸ Most of the chronological indications from the ceramics of the loci considered here originate from a preliminary assessment conducted during the autumn campaign 2011 by Irene Forstner-Müller and Pamela Rose with the help of Karin Kopetzky and David Aston (Forstner-Müller – Rose 2012/2013, 56). Additional information on the pottery was kindly made available by Vera Michel, who is conducting a PhD research on the ceramics of this area at the University of Heidelberg.



Fig. 1 Plan of Tell el-Dab'a with the indication of the areas of provenience of Khayan seal impressions (Plan: © OeAW-OeAI/A. Hasler)



Fig. 2 Distribution plan of the Khyan sealings from area R/III and their position within the plan (Plan: © OeAW-OeAI/A. Hassler, V. Michel)

impressions found in each locus⁹. A short excursus about further Khyan seal impressions found at Tell el-Dab^a in past excavations is included, summarizing their typological data and provenance.

2 Tell el-Dab^a and the contexts of the Khyan's seal impressions

2.1 The settlement of Avaris in area R/III

The western part of area R/III was settled initially during the early 15th Dynasty, and in the later Second Intermediate Period the settlement extended gradually to the east. Up to that time, it was a typical town quarter of Avaris, with no differentiation between domestic and funerary space.

In the late Second Intermediate Period the area was reorganised and divided into three complexes. These individual complexes are – as is typical for this period – oriented northnortheast-south-southwest and they are separated from each other by two parallel streets, street 1 and 2¹⁰ (fig. 2).

Complex 1 consists of several abutting elements including rooms, casemate structures and courtyards. The actual floor levels are mainly lost and only the foundations have been excavated. Wall widths¹¹ suggest that at least some of the buildings had upper floors. The courtyards contained silos of varying sizes, which were accessed from the southeast, and ovens were built in the corners. No burials (with the exception of infant jar burials) were found in this complex.

Complex 2, the central part of the excavated area, is defined on its western and eastern borders by two streets. Two house units (building 1 and 2) were fully excavated. Their ground plans are characteristic of ancient Egyptian architecture, and are similar to examples from other sites such as Elephantine, Illahun and New Kingdom Amarna¹². The houses consist of an entrance area, a middle part with a central room and private rear quarters. Attached to them are open spaces and courtyards with silos. Again no burials were found here.

Complex 3 in the east is a typical domestic town quarter with dense building activity, characteristic of other areas in Avaris. Towards the east and south the settlement pattern changes: the units become smaller and are separated from each other by subsidiary streets. In contrast to complexes 1 and 2, burials are found within complex 3.

The ground plan, the architecture and in part the finds from the three complexes hint at a different use and function of the space within the area. The western part (complex 1) with its agglutinating rooms and courtyards appears to be the most likely location for an administrative sector. Complex 3 in the easternmost part is clearly a domestic quarter with streets, houses and burials. The middle part (complex 2) shows architectural types well-attested in domestic architecture and include finds that indicate that manufacturing may have taken place therein¹³.

Storage facilities are found all over the area. Silos are built within courtyards, and the elongated rooms of unit A in complex 1 possibly fulfilled a storage role. The presence of such facilities, along with the recovery of seals, sealings and other administrative material suggest an ongoing redistributive role at least in part of the area.

2.2 The contexts of the Khyan seal impressions from area R/III¹⁴

Seal impressions from area R/III referring to Khyan were retrieved from complex 1, from street 1 – dividing complex 1 from complex 2 – and from the southern part of complex 3. None were found within complex 2 (figs. 2, 3).

⁹ To which will be referred as »sealing context« in the following pages.

¹⁰ Forstner-Müller – Rose 2012/2013, 56; Forstner-Müller et al. 2015.

¹¹ Some of those walls are almost 1 m wide.

¹² Bietak 1996; Ricke 1932.

¹³ See, e.g. a model of a hippopotamus: Forstner-Müller – Prell 2016.

¹⁴ The dating of the stratigraphic units is based on the pottery found in them.

None of the nine Khyan sealings was found in a primary context: all of the impressions, possibly including the earliest piece, were found in stratigraphically later contexts.

The seal impression uncovered in the earliest deposit (inv. 9465) was found in square r/5, planum 12, L473¹⁵. There a test trench was excavated along the northwestern edge of the 2010 excavation area in order to reach the lowest settlement layers, and to clarify the stratigraphy of the town quarter (fig. 2)¹⁶. L473 is a muddy-ashy deposit, probably a refuse layer, within a courtyard or open space running from a partly excavated building below complex 1. This layer can be dated to stratum E/1¹⁷ (1st half of the 15th Dynasty).

Three Khyan seal impressions (inv. 9464, 9446 N, 9466 N) were found within complex 1 (fig. 2). Inv. 9464 and 9446 N were found in square q/6–7, planum 2, L338: this is a muddy deposit from the northernmost elongated room of unit A (room 1 in the plan, fig. 2) which can be dated to the end of the Second Intermediate Period (stratum D/2) at Tell el-Dab^a.

Inv. 9466 N was found in the southeastern area of complex 1, in courtyard 3, between silo 3 and the western enclosure wall of courtyard 2. The deposit to which the sealing belongs to (L325) consists of pale compact mudbrick debris, that accumulated after the dismantling of a former storage area containing silos. Later pits disturbed this area. According to the first ceramic assessment, the locus may be dated to the late Second Intermediate Period (stratum D/3 or D/2).

Two further Khyan seal impressions (inv. 9664 M and 9664 N) were found in complex 3 (fig. 2). These two sealings were retrieved from abandonment layers of the same building (building 7), situated in the eastern part of the excavated area of complex 3. Both date to the late Second Intermediate Period (stratum D/2) at Tell el-Dab^a, and in the case of 9664 M may continue into the New Kingdom.

Inv. 9664 N comes from the abandonment phase of the building, from L1335, a compact mudbrick debris layer uncovered in planum 2 of square q/10 and covering room 4 of building 7.

Inv. 9664 M was found to the east of inv. 9664 in square q/10, planum 1, within L1239: this is a mix of compact mudbrick debris with patches of muddy material and occasional fragments of pottery and limestone. This locus is an abandonment layer, which covered room 3 of building 7.

Finally, three sealings (inv. 9466, 9453 M, 9452 R) were discovered in street 1, which separates complex 1 from complex 2 (fig. 2). Inv. 9466 and 9453 M were found in square r/7, planum 3–4 within a muddy-sandy layer (L260) of the street. This was the earliest street layer, and more likely a preparation level for the street than an actual street surface. It was identified at the foundation level of the buildings of the complexes 1 and 2. The context can be dated to the late Second Intermediate Period (possibly to the transition between stratum D/3 and D/2).

Inv. 9452 R was also found in square r/7, in a locus (L66) belonging to the later phase of the same street, a muddy-sandy layer which corresponds to the uppermost street surface. The context can be dated to the late Second Intermediate Period (stratum D/2 or even later).

2.3 The contexts of other Khyan seal impressions from Tell el-Dab^a

Up to now, seal impressions bearing this royal name have been found only in two areas of Avaris, in area R/III (described above) and area F/II (fig. 1). A scarab seal with the name of king Khyan was found in ^aEzbt Rushdi to the west of the Middle Kingdom temple¹⁸ (fig. 1).

A concise description and the stratigraphic evaluation of the contexts from area F/II containing sealings bearing impressions of Khyan will be presented below. The classification of the Khyan

¹⁵ The stratigraphic units in the Tell el-Dab^a excavation system are called »loci« (shortened to L).

¹⁶ The settlement seems to have maintained the same orientation throughout its occupation.

¹⁷ For the proposed correlation of the Tell el-Dab^a phases with absolute chronology, see generally Bietak 2010a, 33 (previously published in 2008).

¹⁸ The scarab was found in the debris near an oven wall, Adam 1959, 221 pl. 10, B. For the description see § 3.3 and tab. 1.

seals found in F/II will be briefly presented in excursus § 4 (tab. 2) concurrently with the seal types from areas R/I and R/III.

In area F/II, a palatial district of the Second Intermediate Period¹⁹, Khyan-related sealings were found in three contexts²⁰. A total of seven seals were found in this area²¹, five of them (inv. 9354. 9355. 9354 Q. 9373 M and 9374 C) in locus L81²², one (inv. 9376 J) in L803 and one (inv. 9396) in L1023 (fig. 4). All seal impressions were found in residual contexts. According to the pottery, it seems that the palatial area in F/II was in use over a long period of time during the Second Intermediate Period.

In a courtyard of the palatial precinct a pit system with an enormous quantity of finds, subsumed under locus L81, was discovered (fig. 4). The five Khyan sealings were found in the filling of these pits (subpits 6 and 12)²³. L81 was originally considered to be connected with ritual activity (offering meals, etc.)²⁴. Recently, however, it has been convincingly suggested by David Aston that it is in fact a huge waste dump associated with the abandonment of the palace²⁵.

L81 dates from the middle to advanced phase of the Second Intermediate Period, although the precise dating is disputed²⁶. The dating is based, as are all Tell el-Dab^a phases/strata, mainly on pottery. The pits partly cut into one another and thus cannot have been cut simultaneously, but the time span over which this activity took place is not known. Whether the pits were filled in one event²⁷ or over a longer period of time is also unclear – however, this took place certainly sometime between the transition from stratum E/1 to stratum D/3 or D/2 (middle or latter phase of the Second Intermediate Period). While Manfred Bietak and David Aston have proposed a date in the earlier half of the 15th Dynasty²⁸, Karin Kopetzky has suggested a later dating²⁹. From the archaeological point of view, it is clear that the L81 pit system is not a closed and secure context: the pits are cut from layers lost to later agricultural activity and were not filled and overbuilt during the palace use³⁰. The uppermost layer of the infilling was deemed recent in date, and therefore was discarded in 2006.

L803 is the remains of an offering pit, belonging to a system of offering pits in a courtyard north of the palatial area (fig. 4). The whole pit system can be dated to the second half of the Second Intermediate Period (stratum D/3 or D/2). The Khyan seal inv. 9376 J was found in the muddy-sandy filling of the pit.

L1023 consists of the ashy filling of a pit which cuts into a building (building S), situated south of the actual palace (fig. 4): inv. 9296 was found within this fill. Building S cannot be directly linked to the palace stratigraphically. It is cut by a large well, which was filled up during the late Second Intermediate Period. Pit L1023 postdates the use of building S, but a more precise dating is not possible.

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¹⁹ For the preliminary reports of the excavation campaigns at area F/II see: Bietak – Forstner-Müller 2006; Bietak – Forstner-Müller 2009; Bietak et al. 2012/2013.

²⁰ Six of these seals, those from L81 found in 2006 and from L803 in 2008, have been published by Sartori 2009, and a picture of the seventh can be found in Bietak 2010b.

²¹ All Khyan seal impressions found in F/II are listed together with the sealings from R/III and the scarab seal from R/I in tabs. 1 and 2.

²² Bietak – Forstner-Müller 2007; Aston – Bader 2009, 63. For further bibliography see also D. Aston's contribution to this volume.

²³ See tab. 2.

²⁴ Bietak – Forstner-Müller 2007, 25–27; Aston – Bader 2009, 63; Forstner-Müller 2011, 2–6. For further bibliography see also D. Aston's contribution to this volume.

²⁵ Aston 2012, 160; Aston 2015, 2.

²⁶ Bietak 2007, 778; Aston – Bader 2009, 20; Aston 2012, 159–162; recently Aston 2015 and originally also Forstner-Müller have proposed a dating corresponding to the time span from stratum E/1 to stratum D/3. Karin Kopetzky on the other hand proposes a dating to the late Hyksos Period: Kopetzky 2010, I, 125 n. 742.

²⁷ Aston 2015, 2.

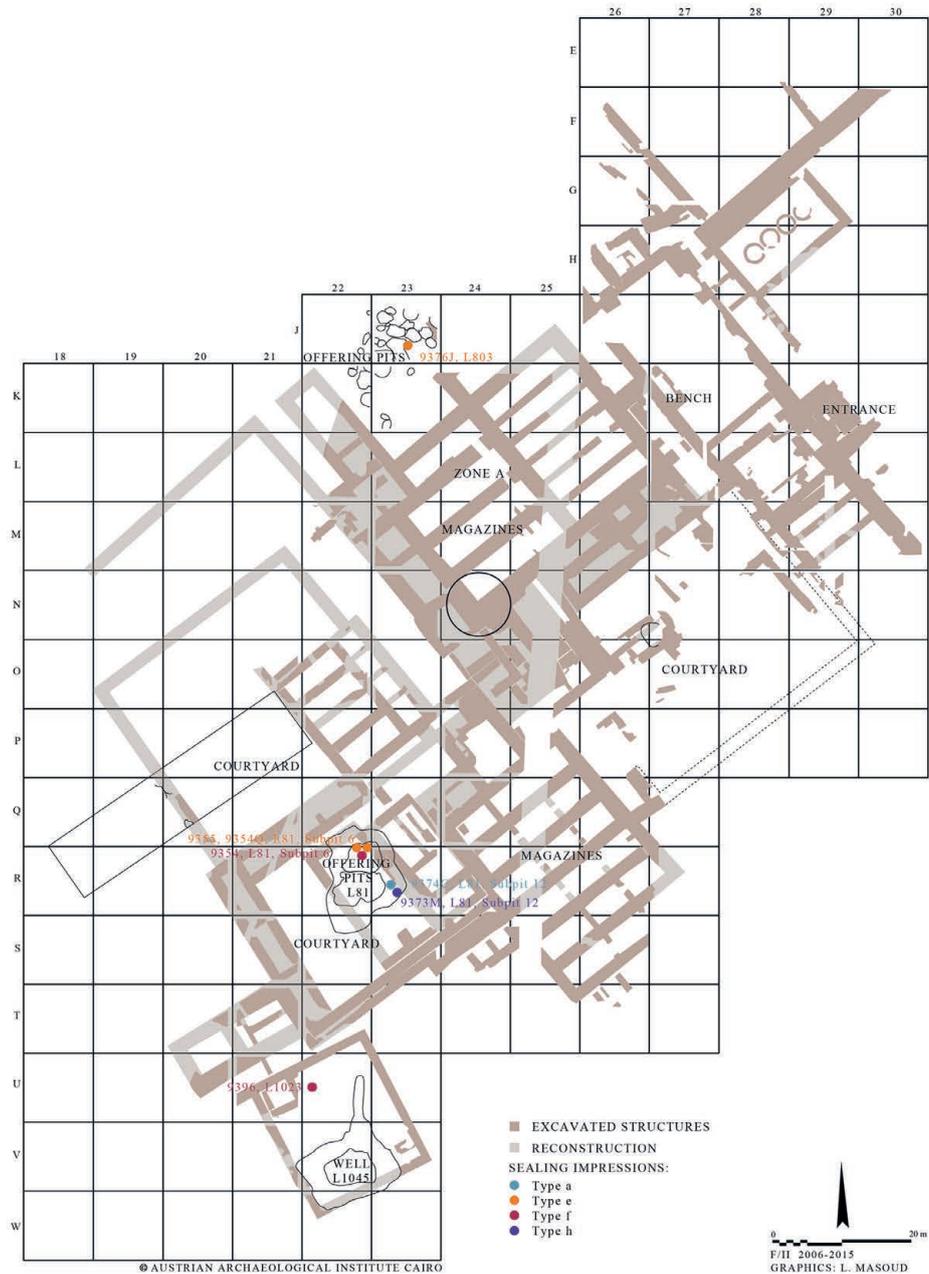
²⁸ See above n. 26.

²⁹ Kopetzky 2010, I, 125 n. 742, followed by the author: see Forstner-Müller – Rose 2012, 193–194.

³⁰ Against Aston 2015, 2.



Fig. 3 Distribution plan of the Khyan sealings from area R/III, seals typology (Plan: © OeAW-OeAI/A. Hassler, V. Michel)



THE FIGURE CONFLATES SEVERAL DIFFERENT PHASES

Fig. 4 Distribution plan of the Khyan sealings from area F/II by type (Plan: © OeAW-OeAI/L. Masoud)

3 Khyan seal impressions from area R/III and their typology

The nine sealings of Khyan found in area R/III were impressed by four (or possibly five) different seals, which are typologically grouped and listed below from type a to type d (their find spot is shown in fig. 2, as discussed above in § 2.2 and summarized below in tab. 1).

Table 1 Kyhan seal types from Tell el-Dab'a listed in order of their stratum of provenance

Tell el-Dab'a stratum of provenance	Type of seal and inv.	Position area – locus – square – planum	Context
D/2 – transition New Kingdom	Type b – 9664 M	R/III, L1239, q/10, pl. 1	latest abandonment layers obliterating R/3 of building 7
D/2	Type a – 9464, 9446 N	R/III, L338, q/6–7, pl. 2	room fill, northernmost room of unit A
	Type d – 9664 N	R/III, L1335, q/10, pl. 2	earliest abandonment layers obliterating R/4 of building 7
D/3–D/2	Type a – 9466 N	R/III, L325, s/6, pl. 3	deposit, south eastern open area of unit F
	Type a – 9466, 9453 M	R/III, L260, r/7, pl. 3–4	earliest recognizable layer (preparation level) of street 1
	Type c – 9452 R	R/III, L66, r/7, pl. 2	first street surface of street 1
	Type e – 9376 J ³¹	F/II, L803, j/23, pl. 1 ³²	pit of the offering pits system in the court of building F ³³
E/1–D/3 ³⁴	Type h (?) – 9373 M	F/II, L81, r/23, subpit 12, pl. 2–3 ³⁵	subpit of pit L81
	Type a – 9374 C	F/II, L81, r/23, subpit 12, pl. 4, sit. 3–4 ³⁶	subpit of pit L81
	Type e – 9355, 9354 Q ³⁷ Type f – 9354 ³⁸	F/II, L81, r/22, subpit 6, pl. 4–5, sit. 1 ³⁹	subpit of pit L81
ca. late E/1 = c/2 ⁴⁰	Type f – 9396 ⁴¹	F/II, L1023, u/22, pl. 1–2 ⁴²	fire-pit south of the palace in building S ⁴³
early E/1	Type b – 9465	R/III, L473, r/5, pl. 12	muddy deposit, outer area of earlier structures below unit F
possibly early Hyksos Period ⁴⁴	Adam 1959, pl. 10, B	R/I, west of the Middle Kingdom temple in 'Ezbet Rushdi	debris layer near an oven ⁴⁵ wall

³¹ Bietak – Forstner-Müller 2009, 94, 105.

³² Sartori 2009, 285.

³³ Bietak – Forstner-Müller 2009, 94.

³⁴ Aston – Bader 2009, 20; Aston 2012, 159–162.

³⁵ Sartori 2009, 285.

³⁶ Sartori 2009, 287.

³⁷ Sartori 2009, 287.

³⁸ Sartori 2009, 288.

³⁹ Sartori 2009, 287–288.

⁴⁰ Bietak et al. 2012/2013, 25.

⁴¹ Bietak 2010b, 989 fig. 15 (top right).

⁴² Bietak – Forstner-Müller 2009, 95.

⁴³ Bietak – Forstner-Müller 2009, 95; Bietak et al. 2012/2013, 25.

⁴⁴ For the stratigraphy of area R/I after the excavations of 1996 see generally: Bietak – Dorner 1998, 12.

⁴⁵ Adam 1959, 219 pl. 20, C.

Type a is the most common group in area R/III with five sealings (fig. 3).

Type b seems to be exemplified by two impressions (fig. 3) but, despite evident similarities between the two examples, we cannot be completely sure whether they were stamped using the same seal or not. For this reason, we may postulate the existence of a fifth scarab seal of Khyan used to seal the *cretulae* from area R/III, to which we refer as type b1.

The third scarab seal type – type c – is represented only by one example from area R/III (fig. 3) and it seems to be a variant of type a.

Similarly, the last identified seal type – type d – is attested only on one *cretula* from area R/III (fig. 3).

3.1 Khyan seal type a

Type a (fig. 5) shows a subdivision into panels⁴⁶ made by double lines: in the central panel the title *hk3-h3swt* appears, followed by the *nomen* of the king without cartouche; the side panels are filled lengthwise by three signs⁴⁷, which show an *ꜥnh* at both extremities and the sign *wꜥm* in the middle of the panel⁴⁸.

The five impressions identified as type a are inv. 9464, 9446 N, 9466 N, 9466, 9453 M⁴⁹ and they originate from three find spots within the area (fig. 3). The most recent context in area R/III, in which impressions made by this seal have been found is L338⁵⁰ (fig. 2).

As well as the two seal impressions of Khyan (inv. 9464 and 9446 N⁵¹, fig. 5), the sealing context of L338 includes an example of a floral motif design (Design class 1E)⁵², belonging to the Second Intermediate Period⁵³ scarab typology, and examples of the Late Palestinian series⁵⁴ such as the asymmetric pattern with Horus eyes (Design class 3B4)⁵⁵ and continuous oblong scrolls (Design class 7A2)⁵⁶.

⁴⁶ Design class 3E, the most widespread design on Second Intermediate Period royal-name scarabs. It also appears on private-name scarabs of this period. Ben-Tor 2007, 86–87.

⁴⁷ Situating this seal within the subclass 3E1, the most widespread design of Khyan using the *hk3-h3swt* title: Ben-Tor 2007, 86–87. For Khyan's exclusive use of 3E1 within the subclasses of panel designs see generally Ward 1984, 165.

⁴⁸ Closest comparisons for this seal are Chicago 18465 in the Oriental Institute Chicago Museum, and Journal d'Entrée 30458 in Cairo Museum (respectively Tufnell 1984, pl. 65, 3215 and 3210). Ward attributes the origin of the panel Design class (3E) to a Middle Kingdom design, showing pairs of hieroglyphs along the long sides of the seal, hence forming two columns (Ward 1984, 165). The development of this design follows through the gradual alteration of the hieroglyphs filling the side panels, which finally lose their original auspicious meaning to become (Design class 3E4) mere horizontal decorative additions to the vertical lines of the panel (Ward 1984, 165). This is why the two hieroglyphs *wꜥm* and *ꜥnh*, sometimes visible on the panel design of Khyan's seals, are never interpreted as ›repeating life‹ but as pseudo-hieroglyphs. This epithet does not seem to have been used for rulers of the Second Intermediate Period (Ryholt 1997, 121 n. 414). The earliest occurrence of the epithet ›repeating life‹ dates to the final phase of the reign of Amenemhat III. The first uses of this formula are recognized during the late 12th Dynasty, when they mostly appear in inscriptions from Sinai expedition sites dated to Amenemhat III and IV. There is no evidence of such an epithet on contemporary stelae found at Egyptian sites, where it is only attested during and after the 13th Dynasty (Doxey 1998, 102). By the end of the 12th Dynasty – beginning of the 13th this epithet seems to have been used for officials having a higher status (Doxey 1998, 102; Leprohon 1996, 530–531).

⁴⁹ Except inv. 9453 M, the other Type a sealings are already published in Reali 2012/2013, 67–73.

⁵⁰ For the stratigraphic evaluation of this locus see § 2.2 and tab. 1.

⁵¹ For a detailed description of the obverses: Reali 2012/2013, 69–70. The preserved stamped surface measures 17.0 × 10.5 mm in the case of inv. 9464 and 12.2 × 6.0 mm as for inv. 9446 N.

⁵² Closest parallel: Ben-Tor 2007, pl. 32, 12.

⁵³ The beginning date for the Second Intermediate Period, which is used for the Ben-Tor seriation is ca. 1700 B.C., see Ben-Tor 2007, 5.

⁵⁴ Ben-Tor refers to the chronology of the Middle Bronze Age only using the division between Middle Bronze IIA and Middle Bronze IIB, refusing the term Middle Bronze IIC. However, she divides the Middle Bronze IIB into an early and late phase, attributing the Early Palestinian series to the early Middle Bronze IIB and the Late Palestinian series to the later phase of the Middle Bronze Age, which dates it to the time span between the 15th and early 18th Dynasties. For the chronology of the Late Palestinian series and its dating, see generally Ben-Tor 2007, 155 and below.

⁵⁵ Closest parallel: Ben-Tor 2007, pl. 79, 35.

⁵⁶ Closest parallel: Ben-Tor 2007, pl. 92, 20.

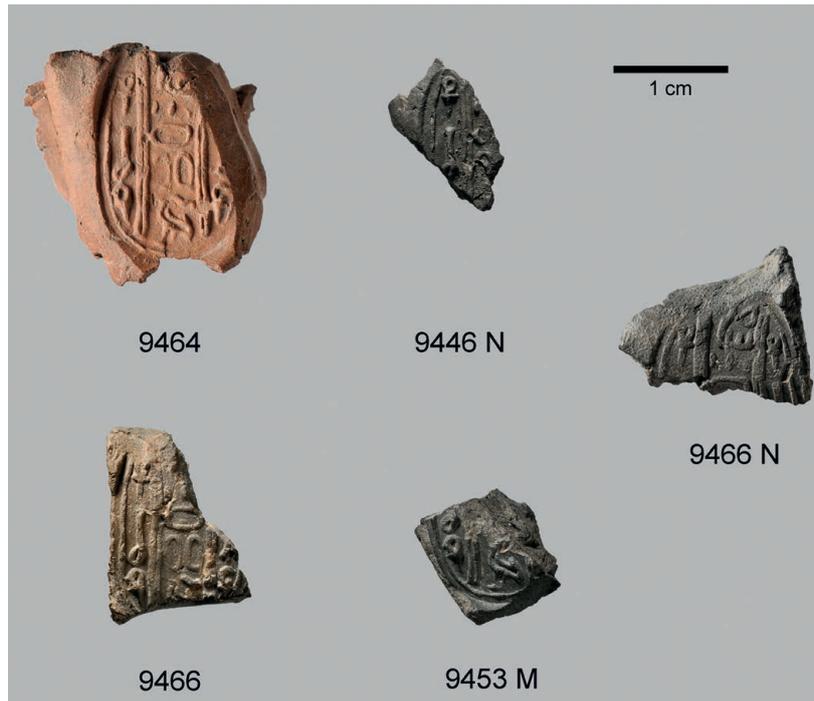


Fig. 5 Khyan seals from area R/III: Type a (Photo: © OeAW-OeAI/A. Krause)

The third fragment of a sealing bearing the impression of a type a scarab seal of Khyan (inv. 9466 N⁵⁷, fig. 5) was found in an open area of unit F within L325⁵⁸ (fig. 3).

Besides the Khyan seal impressions the sealing context contains examples of the Early Palestine series⁵⁹, such as three columns of three hieroglyphs each (Design class 3A3 varia)⁶⁰ or two pairs of paired scrolls (Design class 7B2 ii)⁶¹, and sealings bearing Late Palestinian series impressions such as the *anra* formulae (Design class 3C)⁶².

The last two *cretulae* bearing the impression of type a (inv. 9466⁶³ and 9453 M⁶⁴, fig. 5) were found within L260 (fig. 3)⁶⁵. The sealing context contains further Egyptian Second Intermediate Period examples, such as Horus eye motifs (Design class 3B4)⁶⁶, and Late Palestinian series patterns such as the nude standing goddess (Design class 10D1)⁶⁷.

⁵⁷ For a detailed description of the obverse: Reali 2012/2013, 71. The preserved stamped surface measures 12.5 × 5.0 mm.

⁵⁸ For the stratigraphic evaluation of this locus see § 2.2 and tab. 1.

⁵⁹ The chronological limits suggested by Ben-Tor for the Early Palestinian Series are between 1700–1650/1630 B.C., which corresponds to the proposed dates for the 14th Dynasty and the beginning of the 15th Dynasty in the Eastern Delta: Ben-Tor 2007, 119.

⁶⁰ Closest parallel: Ben-Tor 2007, pl. 51, 35.

⁶¹ Closest parallel: Ben-Tor 2007, pl. 61, 21.

⁶² Closest parallel: Ben-Tor 2007, pl. 84, 24.

⁶³ The preserved stamped surface of inv. 9466 measures 14 × 12 mm. For a detailed description of the obverse: Reali 2012/2013, 69 f.

⁶⁴ The preserved stamped surface measures 8 × 9 mm and bears the impression of the lower part of the seal. The preserved impression shows the underside of the sign *whm* and the complete inferior *nh* of the right side panel of the scarab (the double dividing line of which is partly preserved), as well as the phoneme *z* of the name *hryn* and a tiny part of the second panel line.

⁶⁵ For the stratigraphic evaluation of this locus see § 2.2 and tab. 1.

⁶⁶ Closest parallel: Ben-Tor 2007, pl. 34, 31 or pl. 42, 8.

⁶⁷ The example representing this design class within L260 bears the impression of a nude standing goddess holding plants. Closest parallel: Ben-Tor 2007, pl. 105, 11. For this piece see also Reali 2017, 28–29. 39 fig. 9.

3.2 Khyan seal type b

The second largest group of Khyan *cretulae* from area R/III (two examples, inv. 9465⁶⁸ and 9664 M⁶⁹), are designated type b, assuming that both seal impressions were stamped using the same seal⁷⁰ (fig. 6).

The upper part of the impression is lost in the case of inv. 9465, and it has been mostly erased by fingerprints on the second sealing (inv. 9664 M). As can be seen on similar Khyan scarab seals⁷¹, we would expect to recognize at least the impression of the lower part of the hieroglyphs belonging to the title⁷² on the tiny part preserved above the cartouche. However, what seems to be certain about type b is that it displays a cartouche with the *nomen* of the king, which is enclosed in a three-paired-oblong scroll border, where the scrolls are looped at the bottom and possibly open on the top⁷³. The lower part of the impression displays the inverted *given life* epithet below the cartouche.

The first of the two examples representing type b, inv. 9465 (fig. 6), was recovered in L473 (fig. 3)⁷⁴ the stratigraphically earliest deposit, in which Khyan seal impressions occur in R/III⁷⁵.

⁶⁸ For a detailed description of the obverse: Reali 2012/2013, 70. The preserved stamped surface measures 10 × 8 mm.

⁶⁹ The preserved stamped surface measures 9.9 × 6.0 mm and it shows the upper part of the original scarab impression, with portions of one oblong scroll on each side, flanking the upper extremity of a cartouche containing the beginning of the *nomen* of the king, i.e. *hy*.

⁷⁰ These two sealings will be treated as belonging to the same group, although in both cases the preserved stamped surface is incomplete and it is possible that these two impressions were left by two different seals, which would hence be classifiable as type b and type b1, as mentioned above.

⁷¹ Tufnell 1984, pl. 56, 3207. 3216. 3218.

⁷² However, it is important to bear in mind that these are seal impressions and not actual seals and to consider both distortion and damage to the clay and to the impressed surface. These factors do not seem to allow any certainty about the original dimensions of the stamp seal and about the distance between hieroglyphs and other components of the motif. Likewise, due to these factors, it may be difficult to have an exact similarity between the impression preserved on sealings and its original matrix (the seal used).

⁷³ Depending on the features of the top of the seal (i.e. looped or open scrolls) the corresponding design class denomination changes: 7B3(ii) – Paired scrolls, three pairs, oblong if the upper scrolls are looped; or 7C3(ii) – Paired scrolls, open, three pairs, oblong if they are open (Ben-Tor 2007, 29–30). Both borders are attested on Khyan seals: 7B3(ii) on Tufnell 1984, pl. 56, 3216–3218 and 7C3(ii), though with the variation of two confronted cobras, on Tufnell 1984, pl. 56, 3220. The first one is the most widespread late Middle Kingdom scroll border appearing on private-name scarabs (Ben-Tor 2007, 29); the second is rarer and appears on a small number of Late Middle Kingdom private-name scarabs. The variant with cobras is attested on few private-name scarabs of the late Middle Kingdom and on some late 12th Dynasty royal-name scarabs (Ben-Tor 2007, 30).

⁷⁴ For the stratigraphic evaluation of this locus see § 2.2 and tab. 1.

⁷⁵ A 13th Dynasty private-name seal impression of the vizier and overseer of the city *Dd-Pth dd.tw-snb* that was found in the foundation of an interior space of a previous phase of the same building (F), within the materials of L589 (planum 15–16 of the test trench) is already published: Marée 2012/2013, 76. This impression was stamped on a *cretula*, closing a small jar rather than a bag, contrary to what has been suggested by Marée by simply referring to the textile impressions on the reverse (Marée 2012/2013, 76). For further textual evidence about this official see: Marée 2012/2013, 76; Grajetzki 2000, 27–28; Martin 1971, 1775–1778. Both names *Dd-Pth* and *dd.tw-snb* and titles «overseer of the city» and «vizier» appear only on a scarab seal, the origins of which are not known (Marée 2012/2013, 76 n. 7; Martin 1971, 1778). The same person seems to be attested as *Dd-Pth* and «chief of tens of Upper Egypt» on two scarab seals, one unprovenanced (Marée 2012/2013, 76 n. 10; Martin 1971, 1776) and the other from the excavations of the pyramid cemetery of Amenemhat I at Lisht (Marée 2012/2013, 76 n. 9; Martin 1971, 1777). Finally, two seal impressions found at the fortress of Uronarti (Marée 2012/2013, 76 n. 5; Martin 1971, 1775; Ryholt 2010, 114 fig. 1) bear the sole name *Dd-Pth* associated with both titles registered at Tell el-Dab^a and on Martin 1971, 1778 (though these impressions were not left). According to Reisner, the fort was abandoned by Egyptian troops in the early 13th Dynasty. Ryholt agrees, stating that its abandonment by the Egyptians took place before the middle of the 13th Dynasty. Skeptical about this dating, Allen and Ben-Tor date this occurrence to the late 13th Dynasty, from the Uronarti ceramic assemblage related to the abandonment phase (Ben-Tor et al. 1999, 55–58), which corresponds to strata F–E/3 of Tell el-Dab^a (opposed by Ryholt 2010, 115–120). For the different dates of the Uronarti context, see Ben-Tor et al. 1999, 55–58; Ben-Tor 2010, 94–95; Ryholt 2010, 113–117). Reisner, Ryholt and Grajetzki consider *Dd-Pth dd.tw-snb* a vizier of the first half of the 13th Dynasty (Grajetzki 2000, 9), contemporary with or at least not much later than Khabau and Djedkheperu (Ryholt 2010, 114–115). While evaluating the material from Tell Edfu, Moeller – Marouard adhere to the interpretation that puts the Uronarti fort

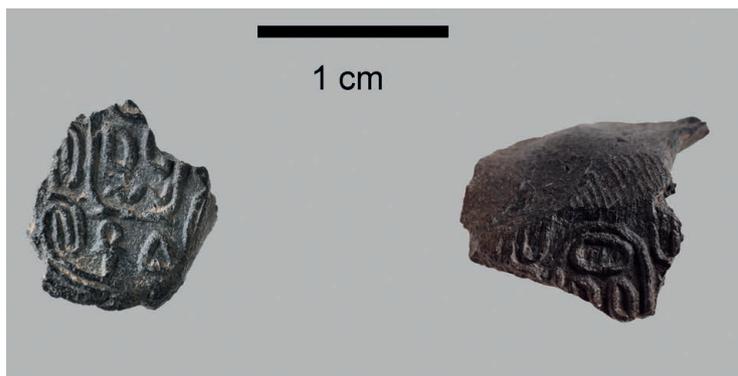


Fig. 6 Khyan seals from area R/III: type b (Photo: © OeAW-OeAI/A. Krause, N. Gail)



Fig. 7 Khyan seals from area R/III: type c (Photo: © OeAW-OeAI/A. Krause)

The sealing context of L473 shows a couple of Late Palestinian series seal impressions, including the one of an antelope (Design class 9B)⁷⁶, and a convoluted coil motif (Design class 6B1–2)⁷⁷ of the Late Middle Kingdom series.

The second *cretula* bearing a type b impression⁷⁸ (inv. 9664 M, fig. 6) comes from L1239⁷⁹ (fig. 3).

3.3 Khyan seal type c

The third type of Khyan seal from area R/III (inv. 9452 R⁸⁰), type c (fig. 7), is very similar to type a, the only difference being the hieroglyph for *h3swt*, here assuming the shape of two reflected triangles, whereas on type a (fig. 5) its mountains resembles comb teeth.

A scarab found in 1959 by Shehata Adam in his excavation of the Middle Kingdom settlement area of °Ezbet Rushdi⁸¹ bears the same calligraphy for *h3swt* and shows only a slightly different treatment of the same prototype. In fact, a single line instead of a double line – as on types a and c – separates each panel⁸².

Inv. 9452 R was recovered in L66⁸³ (figs. 2, 3), a layer in which two further Khyan sealings of type a were found (inv. 9466 and 9453 M). In this deposit also occur Second Intermediate Period panel motifs (Design class 3E)⁸⁴; Late Palestinian series cartouche (Design class 3D1 or 2)⁸⁵ or gold sign (*nbw*) motifs (Design class 3B6)⁸⁶ and Second Intermediate Period or Early/Late Pal-

context in the late 13th Dynasty, distancing themselves from the dating to the early 13th Dynasty as suggested by Ryholt (Moeller et al. 2011, 108).

⁷⁶ Closest parallel: Ben-Tor 2007, pl. 96, 13.

⁷⁷ Closest parallel: Ben-Tor 2007, pl. 14, 6.

⁷⁸ Assuming a common matrix (scarab seal) used for both impressions.

⁷⁹ For the stratigraphic evaluation of this locus, see § 2.2 and tab. 1. It is not possible to supply information concerning this sealing context yet because the analysis of the material coming from the western side of the area R/III is still ongoing.

⁸⁰ Design class 3E1, Ben-Tor 2007, 86–87. For a detailed description of the obverse: Reali 2012/2013, 70–71. The preserved stamped surface measures 11 × 5 mm.

⁸¹ Adam 1959, 207. This area is very close to R/III, and was previously excavated by Shehata Adam at the end of the 1950s, and then again investigated in 1996, constituting the current area R/I. It revealed a Middle Kingdom temple dedicated to the *Ka* of Amenemhat I that was abandoned in the course of the 13th Dynasty as well as a settlement dating to the beginning of the 12th Dynasty: Bietak 1994, 424; Bietak – Dorner 1998, 9; Czerny 2001, 13; Czerny 2012; Czerny 2015.

⁸² Adam 1959, pl. 10, B; Tufnell 1984, pl. 56, 3208.

⁸³ For the stratigraphic evaluation of this locus see § 2.2 and tab. 1.

⁸⁴ Closest parallel: Mlinar 2001a, TD 1061, 163. For this scarab and its context also Ben-Tor 2007, 86.

⁸⁵ A similar example: Ben-Tor 2007, pl. 85, 1 although the one from area R/III shows confronted cobras on the top.

⁸⁶ Closest parallel: Ben-Tor 2007, pl. 81, 11.



Fig. 8 Khyan seals from area R/III: type d (Photo: © OeAW-OeAI/C. Reali)

estinian series⁸⁷ red crowns designs (possibly *tête-bêche*, Design class 3B3e, or addorsed, Design class 3B3b)⁸⁸.

3.4 Khyan seal type d

The fourth and final scarab type of Khyan from area R/III (type d) is a new type in the series of Khyan seals (fig. 8). On inv. 9664 N⁸⁹ Khyan is attested with both Egyptian and Hyksos titles, and this is contrary to what textual evidence has suggested previously about the use of titulary and royal names by this king, or to the idea that his seals bearing the *hk3-h3swt* title never show a cartouche nor other Egyptian royal features⁹⁰.

The seal impression shows the panel subdivision made by a single line with a variation on the more usual panel scheme (3E with two signs in margins⁹¹): at the bottom of the dividing lines there is a pair of addorsed cobras, which are linked on the top. This panel arrangement is otherwise attested only on Canaanite scarabs⁹² and on some private-name scarabs⁹³.

A parallel from Tell el-Dab^a (stratum E/1⁹⁴) with looped *uraei* panels is a pseudo-king's name scarab bearing the name of Sobekhotep, which was found in a tomb context in area A/II (square p/20, tomb 2⁹⁵). Analogies for the layout of panels and cobras in connection with the name of Khyan can be seen on a steatite scarab, today in the Metropolitan Museum of Art⁹⁶, two seal impressions from the pit system L81 of area F/II of Tell el-Dab^a (inv. 9355 and 9354 Q⁹⁷) and a further *cretula* from area F/II (inv. 9376 J⁹⁸).

⁸⁷ Since only part of the seal impression is preserved and there is no additional information about the rest of the scarab features, this impression cannot be attributed to one or the other Second Intermediate Period group (i.e. the one for the scarabs produced in Egypt, or for those from the Levant).

⁸⁸ Closest parallel: Ben-Tor 2007, pl. 79, 19.

⁸⁹ The preserved stamped surface measures 10 × 10.1 mm.

⁹⁰ Ryholt 1997, 124.

⁹¹ Ben-Tor 2007, 86–87; Tufnell 1984, 122–123.

⁹² Ben-Tor 2007, pl. 57, 22. 29. 31.

⁹³ Ben-Tor 2007, 87 n. 430.

⁹⁴ Mlinar 2001a, 26.

⁹⁵ Mlinar 2001a, 26 und TD 518, 201.

⁹⁶ MMA 10.130.36; Martin 1971, 1173; Tufnell 1984, pl. 56, 3211.

⁹⁷ Sartori 2009, 286–287; Bietak – Forstner-Müller 2009, 96.

⁹⁸ This sealing comes from the same area as L81 but not from the pit itself. It was found in L803, a pit in a court situated north of a possible storage area of the building, in the so-called Abschnitt F. Sartori 2009, 285. 287; Bietak – Forstner-Müller 2009, 94.

The impression on 9664 N shows both the titles $s_3 R^c$ and hk_3-h_3swt , followed by the *nomen* of king Khyan (preserving only its initial phoneme h^{99} ; however, there appears to be enough space below it to accommodate the rest of the king's *nomen*), which occupies the central panel. The hieroglyphs for $'nh$ and whm are visible on both side panels above the cobras' heads.

This sealing was found at the southeastern edge of the excavation area within L1335 (figs. 2. 3)¹⁰⁰.

4 Excursus: An overview of Khyan seal types from Tell el-Dab^a

The typological classification of Khyan seals (type a–d) presented in this paper up to now summarized seal impressions related to the Hyksos ruler Khyan, which were found in the area R/III of Tell el-Dab^a. However, in other excavation areas of this site (precisely in R/I and F/II), further Khyan-related seals and seal impressions were discovered, which do not fit within the above-mentioned seal types. Therefore, as anticipated above, a brief review of the Khyan-related seal types identified so far at Tell el-Dab^a will be presented. The following table 2 summarizes the main features, the number of examples and their provenance, adding four further types (type e–h) to those discussed above (type a–d). The entries list the eight Khyan seal types (a–h) identifiable within the Khyan-related administrative material from Tell el-Dab^a: that is overall a total of sixteen sealings and one scarab from the three areas¹⁰¹.

Two of the eight types (type c and g) actually represent a variant of type a and are differentiated from it through the presence of a distinctive calligraphy for the same hieroglyph (type c and g) and through the presence of a single instead of a double line defining the panels (type g).

Despite the use of two distinct seals for sealing inv. 9354 and 9396, they have both been assigned to type f, because neither the design nor the calligraphy that was adopted differs. Their dissimilarity consists essentially in the dimensions of the impressed surface¹⁰², some slight dimensional differences within the elements of the composition and, finally, a coarser finish¹⁰³.

Type h shows the almost complete Hyksos titulary, and for this reason it is possibly linked to Khyan; however, given the lack of parallels for the kind of border used in this type of seal in association with the *nomen* of Khyan preceded by the Hyksos titulary¹⁰⁴, the attribution to Khyan cannot be certain.

The following classification of the seal types encountered at Tell el-Dab^a has only an illustrative intention: it is far from establishing a scarab typology for Khyan and does not attempt to do this.

⁹⁹ Aa I in the list of hieroglyphic signs, Gardiner 1957, 539.

¹⁰⁰ For the stratigraphic evaluation of this locus see § 2.2 and tab. 1. Unfortunately, as for inv. 9664 M, it is not possible to supply information concerning this sealing context, because the documentation of the material from the western side of the area R/III is ongoing.

¹⁰¹ This excursus does not include a sealing found in 2009 east of the magazine area of the so-called Abschnitt A in F/II. In the preliminary report of the 2009 excavation campaign (Bietak – Forstner-Müller 2009, 94–95), ›Abschnitt A‹ is indicated as the area of provenance of a »possible« Khyan sealing, however no picture of the object has been published along with the report. For the number of Khyan sealings from area F/II see also n. 128.

¹⁰² In this case, it seems to me that the difference in the dimensions of the impressed surface is not attributable to the distortion of the clay, but rather to the larger size of the seal that was used.

¹⁰³ The coarser finish may be the result of poor quality execution or of the recourse to a lower quality material for the scarab.

¹⁰⁴ Sartori 2009, 285. A single existing scarab seal showing the same border as 9373 M (7C3, paired scrolls open) in association with Khyan was found at Tell el-Yahudiyeh (Ben-Tor 2007, 106). However, the *nomen* of the king is preceded there by the $s_3 R^c$ title: Ben-Tor 2007, pl. 43, 7. Both examples, the scarab seal from Tell el-Yahudiyeh and the seal impression from Tell el-Dab^a area R/III, represent the extremities of the open scroll border as two confronted cobras, following the Late Middle Kingdom variant of 7C3 design (Ben-Tor 2007, 107).

Table 2: Classification of Khyan seals from Tell el Dab^a

Type	Design class	Description	No. of examples	Inv.	Provenance area	Figure reference
a	3E1 ¹⁰⁵	Three signs in margins, panels divided by double line, <i>hk3-h3swt</i> title + <i>nomen</i>	6	9464 9446 N 9466 N 9466 9453 M ¹⁰⁶ 9374 C ¹⁰⁷	R/III R/III R/III R/III R/III F/II	fig. 3 Sartori 2009, 287 fig. 10
b	7B3(ii) ¹⁰⁸	Three paired oblong scrolls border, looped at the bottom and possibly open on the top, title (?), cartouche + <i>nomen</i>	2	9465 9664 M ¹⁰⁹	R/III R/III	fig. 4
c	3E1 ¹¹⁰	Variation of type a (the only visible difference is in the writing of <i>h3swt</i>), <i>hk3-h3swt</i> title + <i>nomen</i>	1	9452 R ¹¹¹	R/III	fig. 5
d	3E2 ¹¹²	Two signs in margins, panels, addorsed cobras at the bottom ¹¹³ , <i>s3 R'</i> and <i>hk3-h3swt</i> titles + <i>nomen</i>	1	9664 N ¹¹⁴	R/III	fig. 6
e	3E2 ¹¹⁵	Two signs in margins, panels, addorsed cobras at the bottom, which are linked on the top; <i>hk3-h3swt</i> title + <i>nomen</i>	3	9355 9354 Q 9376 J	F/II F/II F/II	Sartori 2009, 286 fig. 8 Sartori 2009, 286 fig. 9 Sartori 2009, 285 fig. 7
f	7B3(ii) ¹¹⁶	Three paired oblong scrolls border, looped on the top and open at the bottom; <i>hk3-h3swt</i> title + <i>nomen</i>	2	9354 ¹¹⁷ 9396 ¹¹⁸	F/II F/II	Sartori 2009, 287 fig. 11 Bietak 2010b, 989 fig. 15
g	3E1 ¹¹⁹	Variation of type a (panels divided by single line and different writing of <i>h3swt</i>), <i>hk3-h3swt</i> title + <i>nomen</i>	1	Adam 1959, pl. 10, B ¹²⁰	R/I	Tufnell 1984, 3208
h (?)	7C3 ¹²¹ Martin's Type I ¹²²	Paired oblong scrolls border, open and with cobras on the top, <i>hk3-h3swt</i> title	1	9373 M	F/II	Sartori 2009, 285 fig. 6

¹⁰⁵ Tufnell 1984, 122–123; Ben-Tor 2007, 86–87.

¹⁰⁶ Inv. 9464. 9446 N. 9466 N. 9466: Reali 2012/2013, 67–73 inv. 9453 M (discussed above).

¹⁰⁷ Inv. 9374 C: Sartori 2009, 281–292.

¹⁰⁸ Tufnell 1984, 129; Ben-Tor 2007, 92. Or 7C3(ii): Tufnell 1984, 130; Ben-Tor 2007, 92–93.

¹⁰⁹ Inv. 9465 (Reali 2012/2013, 67–73). 9664 M (discussed above).

¹¹⁰ Same references as for type a.

¹¹¹ Inv. 9452R: Reali 2012/2013, 67–73.

¹¹² 3E2; Tufnell 1984, 122.

¹¹³ Ben-Tor 2007, 87.

¹¹⁴ Inv. 9664 N (discussed above).

¹¹⁵ Same references as for type d.

¹¹⁶ Tufnell 1984, 129; Ben-Tor 2007, 92.

¹¹⁷ Inv. 9354: Sartori 2009, 281–292.

¹¹⁸ Bietak 2010b, 989 fig. 15 (top right).

¹¹⁹ Same references as for type a.

¹²⁰ In this case, a scarab: Adam 1959, pl. 10, B; Tufnell 1984, pl. 56, 3208.

¹²¹ See also n. 104.

¹²² Type I of Martin bases' typology. Martin 1971, pl. 49, a1³.

5 Parallels for Khyan seal impressions from area R/III

The search for chronologically reliable parallels concerning sealings and scarab seals is not unproblematic. The main sources for comparison are indeed scarabs sold on the antiquity market and nowadays belonging to private collections, which do not supply any indication about their provenance¹²³; or seals coming from old excavations, for which not always clear indications about the stratigraphic position are available or, finally, scarabs uncovered in funerary contexts, which as status symbol items in addition to their use as amulets, may be much older than the burial itself¹²⁴. However, for two of the seal types identified at area R/III (type a and b), there are parallels (in this case, sealings) coming from stratified contexts, which may contribute to their chronological evaluation.

5.1 Parallels from Tell el-Dab^a

A sealing recovered in the already-discussed area F/II (inv. 9374 C)¹²⁵ shows similarities with type a (see tab. 2) but it preserves only the upper part of the impression, showing a panel division using double lines, the *hk3-h3swt* title and the beginning of the *nomen*: *h*. It originates from a sub-pit¹²⁶ of the pit complex L81 (see § 2.3)¹²⁷.

The additional six sealings from area F/II¹²⁸ bearing impressions of king Khyan¹²⁹ show at least two¹³⁰ seal types, which are not found at area R/III.

¹²³ Keel 1995, 259.

¹²⁴ Ward 1987, 508.

¹²⁵ Sartori 2009, 287–288.

¹²⁶ Sartori 2009, 287–288.

¹²⁷ Bietak 2007, 778; Aston – Bader 2009, 20; Aston 2012, 159–162 date the filling of this large pit system to the transition from stratum E/1 to stratum D/3 of Tell el-Dab^a. Kopetzky on the other hand reaches a different chronological estimation of the same filling, proposing a dating in the late Hyksos Period: Kopetzky 2010, I, 125 n. 742. I personally accept Aston's chronological interpretation of the material, while Forstner-Müller considers a longer time span for the ceramic material filling the pit complex (strata E/1–D/2 of Tell el-Dab^a), embracing Kopetzky's interpretation.

¹²⁸ Some clarification should be given here concerning the actual number of Khyan-related seal impressions from area F/II (7). The preliminary report of the 2008–2009 excavation campaigns gives a total of nine Khyan-related sealings from F/II, two more than the actual number. Such confusion may have originated from the following sentence in Sartori 2009, 284–285: »Von besonderer Wichtigkeit für die Datierung des Gebäudekomplexes von Areal F/II sind sechs Siegelverschlüsse, die in Verbindung mit den Hyksoskönigen stehen (Abb. 6–11): fünf Stücke tragenden Titel *hk3-h3swt* und vier den Namen des *hy3n* Ch(a)yan/Chiyaran/Chayran, eines der »grossen Hyksos« der 15. Dynastie.« Here, in fact, the correct number of Khyan sealings (6) uncovered during the excavation campaigns of 2006 and 2008 is given; there follows the partial sum of the sealings bearing the title (regardless of whether followed by the king's name or not) or the name/part of the name. Besides the already-mentioned sealing from the so-called Abschnitt A (see n. 101), the distribution chart in Bietak – Forstner-Müller 2009, 94–95 indicates an extra piece of a Khyan impression from L81 (six sealings instead of the actual five). Finally, the preliminary report of the 2011 excavation campaign in F/II reports eight sealings bearing the impression of this king and coming from L81 (evidently a misprint), besides a further Khyan sealing uncovered during the excavation campaign of 2009 in a fire-pit within the southern building S, which according to the excavator may be dated to stratum c/2, or E/1 of Tell el-Dab^a, see Bietak et al. 2012/2013, 25.

¹²⁹ Two of them bear the complete *nomen* of the king; one preserves only the final part of it and the fourth shows only the *hk3-h3swt* titulary, but it is certainly attributable to the seal type of one the best-preserved impressions of Khyan from this area (Sartori 2009, 285–287). Besides the sealings with the incontestable impressions of Khyan there is one more, which preserves only the title *hk3-h3swt*. This may also have been stamped by a seal of Khyan, Sartori 2009, 285; Bietak – Forstner-Müller 2009, 94–95.

¹³⁰ Or three seal types, in case Type f (see tab. 2) is effectively a Khyan's seal impression.

5.2 Parallels outside Tell el-Dab^a

The Mission of the Oriental Institute of the University of Chicago at Tell Edfu, in Upper Egypt, has recently discovered seal impressions bearing the name of the Hyksos ruler Khyan¹³¹.

There, in a columned hall of an administrative building¹³² excavated in 2010/2011, were found 44¹³³ seal impressions stamped using the same scarab seal bearing the *nomen* of Khyan, which seems to be very close to type b (fig. 6). The seal used bore the *nomen* of the king, which was inscribed in a cartouche set within a three paired oblong scrolls border, Design class 7B3(ii)¹³⁴. The *nomen* was preceded by the royal title *sꜣ R^c* and followed by the given life epithet. The same context revealed six impressions bearing the name of the 13th Dynasty king Sobekhotep IV¹³⁵, further *cretulae* showing late Middle Kingdom private-name seals impressions¹³⁶, sealings bearing a Palestinian series motif¹³⁷ and, finally, ceramic shapes showing continuity with late Middle Kingdom styles¹³⁸. According to the type b impressions from Tell el-Dab^a, it is not certain whether their original matrix bore the *sꜣ R^c* title or not. However, comparisons with similar seals¹³⁹ found in Egypt and in the Levant, bearing the *nomen* of Khyan inscribed in a cartouche and introducing him as an »Egyptian king« and not as »a ruler of the foreign countries«, may allow us to state with a certain plausibility that type b also bore this title.

6 Khyan scarab seriation and his royal career: considerations in light of the newly-discovered type d

Establishing a chronological sequence within the Khyan seal types is not an easy matter, firstly because few examples with his name come from excavations rather than the antiquities market¹⁴⁰ and also because the number of those coming from stratified contexts is even smaller. The result of this situation is that we are lacking a series of points in the relative chronology that would allow us to undertake such an operation: and the same issues hold true for the establishment of a royal-name sequence of the period in question.

From this basis it is difficult to identify potential valid criteria for the establishment of a chronological seriation (both within the whole series of royal names and within the Khyan-related examples), but it is still possible to make some suggestions in this regard based on the material presented here.

Ward used the seal length of royal-name scarabs along with further stylistic features to create a seriation of the royal-name scarabs of this period¹⁴¹, although it did not result in the creation of a suitable parameter for chronological classification¹⁴². However, the length of the seal types from area R/III supplies some additional information, which may be useful to tentatively group different types together. For instance, the correspondence suggested by the designs of the above-listed panelled examples (Design class 3E1) falling into type a (fig. 5) and type g (tab. 2), may be confirmed by their similar length¹⁴³. The fragmentary condition of inv. 9452 unfortunately does

¹³¹ Moeller et al. 2011.

¹³² Moeller et al. 2011, 87.

¹³³ Moeller et al. 2011, 110.

¹³⁴ Tufnell 1984, 129; Ben-Tor 2007, 92; Moeller et al. 2011, 109–110.

¹³⁵ Dated to the mid-13th Dynasty. Moeller et al. 2011, 93, 110, 113; Ryholt 1997, 229–231.

¹³⁶ Moeller et al. 2011, 110: 2654s.138; 2654s.34; 2654s.13.

¹³⁷ Moeller et al. 2011, 2654.s.1.

¹³⁸ Ayers 2011, 115–119.

¹³⁹ Tufnell 1984, pl. 56, 3207, 3216–3220; Ben-Tor 2007, pl. 43, 1, 5–8.

¹⁴⁰ Tufnell 1984, pl. 56; Ryholt 1997, 383–385.

¹⁴¹ Ward 1984, 164–165, 188.

¹⁴² Ward himself judges the length of scarabs insufficient if used as the only criterion: Krauss 1998, 39. For further debate about this subject: Ryholt 1997, 43; Ben-Tor 2007, 106.

¹⁴³ Type a (only the best-preserved examples): inv. 9464, length 17 mm; inv. 9466, the preserved length is 14 mm, but it seems reasonable to attribute a length of 16–17 mm to the complete impression. The length of the scarab

not tell us anything about the original length of type c (fig. 7), which also seems to be a variant of type a. The length of type b seems to correspond to that of the seal impressions from Tell Edfu¹⁴⁴, whereas further known scarabs displaying similar designs have bigger dimensions¹⁴⁵. Finally, type d (fig. 8) and type e (tab. 2), which despite the use of different titularies show panels and addorsed cobras at the bottom, present similarities in size as well¹⁴⁶.

Beyond the suggestions based on seal length, one of the identified seal types (type d fig. 8) may allow further deductions concerning a potential Khyan-seal seriation and about the changes of his titulary. Khyan is assumed to be the first king to adopt the *prenomen* and *nomen* and to abandon the title *ḥkꜣ-ḥꜣswt*¹⁴⁷. The only ruler of this period other than Khyan who is attested using both Egyptian and Hyksos titles is Sakir-Har. In fact, Sakir-Har's first three royal names¹⁴⁸ were found on a limestone doorjamb uncovered within the 18th Dynasty palatial district of H/III at Tell el-Dab'a in a secondary context¹⁴⁹. Because of this similarity, Khyan has been proposed as a successor – possibly the direct successor – of Sakir-Har¹⁵⁰. Thus far, Sakir-Har is the sole Hyksos king for whom a simultaneous adoption and use of the Egyptian and the Hyksos titles has been ascertained before the excavations in area R/III. Earlier evidence about the kingship of Khyan using Hyksos and Egyptian¹⁵¹ titulary separately was interpreted as reflecting two distinct stages of his life¹⁵² and political career, in which Khyan initially assumed the *ḥkꜣ-ḥꜣswt* title and only later the *prenomen/nomen*, at that time abandoning the former title and possibly adopting the whole Egyptian titulary¹⁵³. The newly discovered Khyan seal type (to which we refer as type d) suggests that Khyan also – possibly at a specific stage during his rise of power – used both titularies concurrently, that is, the *ḥkꜣ-ḥꜣswt* title and the *sꜣ Rꜥ*.

As mentioned above, Kim Ryholt suggests that Khyan might have adopted the *prenomen* and *nomen* in an advanced stage of his reign, replacing the title of *ḥkꜣ-ḥꜣswt* that was supposedly no longer used after his reign¹⁵⁴. This assumption derives from the observation that the seals of Khyan inscribed with *ḥkꜣ-ḥꜣswt* never show cartouches nor other royal attributes¹⁵⁵, and furthermore that Apophis – thus far supposed to be the direct successor of Khyan¹⁵⁶ – seems to have never reused the Hyksos titulary¹⁵⁷.

With regard to type d, which shows a joint Egyptian and Hyksos titulary, considering Tufnell's hypothesis that the panel design (3E) – absent in the Late Middle Kingdom and first occurring among the Early Palestinian series – may derive from the cobra addorsed and linked design (3B1b)¹⁵⁸, we may tentatively suggest an earlier stage for type d (similarly showing panels and

found by Adam (Adam 1959, pl. 10, B) in area R/I, which we assigned to type g, is 18 mm (Tufnell 1984, pl. 56, 3208).

¹⁴⁴ The best-preserved example of type b, inv. 9465, reaches a length of 10 mm, whereas the length of the Khyan impressions from Tell Edfu is 16 mm. Although the different state of preservation of the material does not allow direct comparisons of length, the distance from the bottom edge to the *ḥ* of the *nomen* Khyan on the Tell Edfu impressions matches that of the type b example from R/III.

¹⁴⁵ Most of the similar examples of Tufnell (Tufnell 1984, pl. 56, 3216–3220) have a length ranging between 18 and 25 mm. Only Tufnell 1984, pl. 56, 3207 has a length of 16 mm.

¹⁴⁶ Type d: inv. 9664 N, the preserved length is 10 mm; however, with the re-integration of the missing bottom part it feasibly reaches 12–13 mm in length. The best-preserved F/II example with panels and addorsed cobras at the bottom, which bears only the Hyksos titulary (type e, inv. 9355) has a length of 12 mm.

¹⁴⁷ Ryholt 1997, 121. 123 n. 418; 124.

¹⁴⁸ Ryholt 1997, 123–124.

¹⁴⁹ Bietak et al. 2002, 56–57.

¹⁵⁰ Ryholt 1997, 124.

¹⁵¹ With *prenomen* and *nomen*: Ryholt 1997, 124.

¹⁵² Ryholt 1997, 124.

¹⁵³ Ryholt 1997, 124.

¹⁵⁴ Ryholt 1997, 124.

¹⁵⁵ Ryholt 1997, 124.

¹⁵⁶ Ryholt 1997, 120.

¹⁵⁷ Ryholt 1997, 120. 124.

¹⁵⁸ Tufnell 1984, 123; Ben-Tor 2007, 135.

addorsed cobras) within the Khyan scarab sequence placed before type a (fig. 5), which displays only the Hyksos titulary.

The hypothetical nature of the last suggestion is obvious; nevertheless, it is a further clue to re-think interpretations thus far made considering the lack of evidence rather than the evidence itself.

7 The functional aspects of the Khyan seal impressions from Tell el-Dab^a (area R/III–F/II) and Tell Edfu

A single scarab seal was used to stamp the *cretulae* of Khyan found at Tell Edfu, which were apparently mostly affixed to boxes¹⁵⁹. They were found in an approximately 10 cm thick debris layer connected to the final occupation phase of the administrative building¹⁶⁰ and they were possibly the result of a single administrative cycle¹⁶¹. A likely explanation for this *cretulae* is that they sealed a batch of goods from the north, which was delivered in boxes¹⁶² within a relatively short period of time¹⁶³.

However, the evidence from the Hyksos palatial area F/II comes from the heterogeneous filling of pit L81¹⁶⁴, which took place sometime between the phases identified at Tell el-Dab^a as stratum E/1 and stratum D/3 (David Aston) or D/2 (Karin Kopetzky)¹⁶⁵, in the middle or latter phase of the Second Intermediate Period. Six¹⁶⁶ seal impressions related to Khyan, which were found within L81 and L803 are already published¹⁶⁷. In terms of functionality, from the published images showing the reverse of the sealings, it is likely that, except for two examples (inv. 9354 and 9373 M¹⁶⁸) clearly affixed to boxes, the rest closed small ceramic vessels (inv. 9376 J¹⁶⁹, 9355, 9354 Q¹⁷⁰) and possibly bags (inv. 9374 C¹⁷¹)¹⁷². Of inv. 9396 only the obverse was published, therefore it is not possible to add any functional information to the iconographic details¹⁷³.

The administrative material from area R/III is likely the result of dumping the material of various administrative cycles covering a longer period of time than at Tell Edfu. Although the sealings from R/III were found in probable tertiary contexts, the presence of pairs of sealings stamped by the same seal within the same context¹⁷⁴, if not accidental, might be interpreted as a – though slight – surviving evidence for filing activities at R/III, consisting of collecting the receipts (i.e.

¹⁵⁹ Only on 29 out of 44 examples the reverses were identified (Moeller 2012, 123): 10 sealings out of 44 bear the impression of a peg on the reverse, 15 the impression of a flat wooden surface with bindings and 4 of them fabric impression (Moeller 2012, 123; Moeller et al. 2011, 100, 109). However, it should be mentioned that the impression of fabric on the reverse of some of the sealings does not exclude the possibility that they were affixed to boxes, both because the fabric impression might have reflected part of the escaped content/lining of the box and because the textile itself might have been used to bind/close the box. For boxes containing textile or fabric lining, see for instance: Müller 2004, 50 and n. 56.

¹⁶⁰ US 2654; Moeller et al. 2011, 97.

¹⁶¹ Moeller et al. 2011, 105.

¹⁶² A closer observation of the functional aspects of the Khyan sealings from Tell Edfu, compared to the ones found at Tell el-Dab^a, might help in the evaluation of the sealed containers and their provenience.

¹⁶³ Moeller et al. 2011, 105.

¹⁶⁴ See above § 2.3.

¹⁶⁵ Aston – Bader 2009, 20; Aston 2012, 159–162; Kopetzky 2010, I, 125 n. 742.

¹⁶⁶ 9376 J is the only one recovered in L 803 (see tab. 2).

¹⁶⁷ Sartori 2009; Bietak – Forstner-Müller 2009, 94–96.

¹⁶⁸ Drawings and images of the reverse (respectively): Sartori 2009, 285, 287.

¹⁶⁹ Alternatively, possibly a bag.

¹⁷⁰ Drawings and images of the reverse (respectively): Sartori 2009, 285; Bietak – Forstner-Müller 2009, 96 and Sartori 2009, 286.

¹⁷¹ Drawing and image of the reverse: Sartori 2009, 287.

¹⁷² This functional assessment of the Khyan's sealings from F/II does not follow a direct analysis of the material but a basic assessment of the images and the drawings of the reverses, which were published in Sartori 2009.

¹⁷³ Bietak 2010b, 989 fig. 15 (top right).

¹⁷⁴ i.e. L 338 and L 260: each locus contained a pair of sealings stamped by type a seals, which had been affixed to boxes.

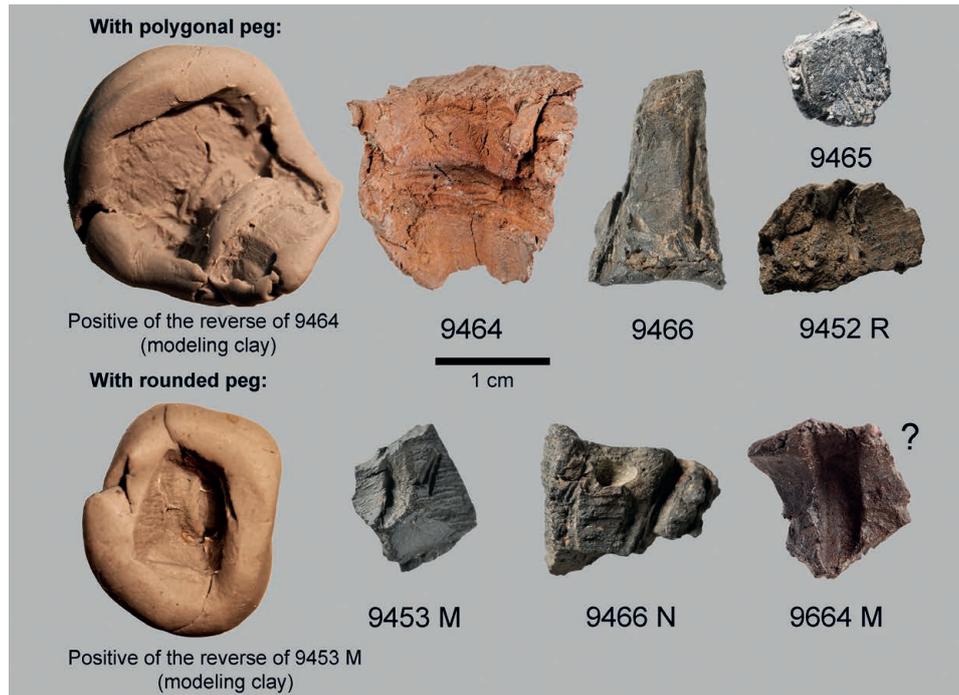


Fig. 9 Containers from area R/III sealed by Khyan seals: boxes (Photo: © OeAW-OeAI/A. Krause, C. Reali, N. Gail)

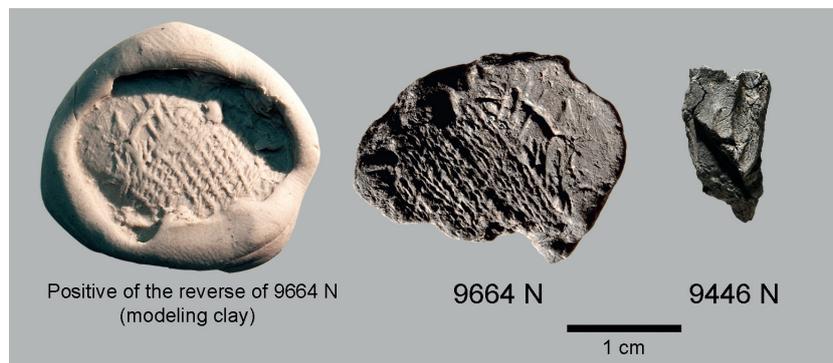


Fig. 10 Containers from area R/III sealed by Khyan seals: small vases (Photo: © OeAW-OeAI/C. Reali, A. Krause)

the fragments of broken sealings retaining the seal impression) of the performed administrative operations. Unlike to what happens at Tell Edfu, the archival activity can only be supposed at area R/III, where contexts showing discarded sequences of sealings and the grouping of homogeneous series of administrative operations are lacking, most likely destroyed by the re-building and levelling activities taking place in the settlement. Two main groups of sealed containers can be distinguished within the *cretulae* from R/III sealed by the seal of Khyan. According to the typologies of their reverses, the largest group seems to consist of *cretulae* closing boxes (fig. 9) whereas the second group is formed by sealings affixed to small pottery jars (fig. 10). The *cretulae* that sealed boxes (fig. 9) are identified by a flat surface showing a wooden impression¹⁷⁵, running perpendicularly to a concave surface/section, which is the impression of a wooden peg, usually twined around by one or more rope loops. Among those sealings, two subgroups can be distin-

¹⁷⁵ However, in other cases it might also bear the impression of plaited vegetal fibers.

guished in respect of the shape of their pegs, i.e. boxes with polygonal¹⁷⁶ and boxes with rounded pegs¹⁷⁷. The second assemblage brings together *cretulae* closing small jars (fig. 10). These are recognizable by the presence of fabric and rope impressions following the outline of the vessel. In one case (inv. 9664 N¹⁷⁸), the transition between the fabric and the pottery impression, possibly from the neck of the container, is visible; the meagre remnants on the reverse of 9446 N simply show tightened fabric impressions forming folds, possibly around the neck of a jar.

In conclusion, the contexts of the Khyan impressions suggest that the sealings from areas R/III and F/II underwent the following process: they were broken in order to open the containers they sealed, collected and discarded, to be later used, together with other previously discarded material, as filling deposits in the areas where they were found. On the other hand, the sealings from Tell Edfu had been broken, possibly collected in specific spots of the administrative unit and not yet discarded. This might mean that the sealings from Tell Edfu are closer to the actual administrative process (and to the act of sealing) than the ones from R/III.

8 General observations

Rather than drawing chronological conclusions about the Khyan seal impressions presented above, I would like to complete this contribution by playing the role of an *advocatus diaboli* to make some remarks about the methodological approach to this kind of material, or rather about the tools used to evaluate it, as well as the role of this material in the chronological discourse.

The Hyksos ruler Khyan is well-known because of his significant position in the current chronological debate, obviously in relation to the site of Tell el-Dab^a, but also to the Aegean chronology¹⁷⁹. However, hitherto no definitive position within the 15th Dynasty has been attributed to this king, whose reign still fluctuates within a sequence of the rulers of the beginning¹⁸⁰, the mid¹⁸¹ and the end of the main Hyksos dynasty¹⁸². Neither recourse to epigraphic nor archaeological material has led so far to a commonly-accepted relative chronological position for this king, who is however considered a key element for the absolute chronology of ancient Egypt and the Aegean world¹⁸³.

Three recently discovered archaeological contexts, which seem to be connected to this king¹⁸⁴ may shed some light on his chronological position. These contexts are L473, the earliest context of area R/III at Tell el Dab^a, in which a Khyan seal impression was uncovered; pit L81 in the area F/II of Tell el Dab^a, and US 2654, excavated in an administrative compound found in the eastern part of Tell Edfu. The presence of artefacts found in these contexts contributes to the estimation of a date within the relative chronology for this king. A common feature of these three contexts

¹⁷⁶ Inv. 9464. 9466. 9465. 9452 R.

¹⁷⁷ Inv. 9453 M. 9466 N. 9664 M. The last *cretula* (inv. 9664 M) is difficult to interpret, because the flat surface, which is usually perpendicular to the peg, is missing here, being substituted by an irregular sloping surface with fabric impression. However, this reverse might be interpreted as a box sealing: in fact, the fabric impression does not prevent us from recognizing it as a box sealing and the absence of perpendicularity between the two surfaces might be due to the deformation, that occurred by unsealing a not yet completely dry *cretula*.

¹⁷⁸ For the sake of clarity, and in order to allow a clear understanding of the three-dimensionality of the object, the reverse of this *cretula* is shown with the same orientation of its obverse. However, a rotation of the reverse 100° clockwise would have been suitable for recognizing the features of the sealing here. Visible on its reverse: stretched fabric impression; four rope-passing holes (two of them recognizable on the reverse, a further two visible only along the broken section) of a cord holding the fabric around the neck (?) of the container; and the impression of the surface of the vessel.

¹⁷⁹ Manning et al. 2014, 1171.

¹⁸⁰ For instance, D. Ben-Tor aligned to W. Ward's sequence (Ben-Tor 2007, 106; Ward 1984, 163. 168) and T. Schneider: Schneider 2006, 194.

¹⁸¹ E.g., Bietak et al. 2012/2013, 25: suggesting the position of the third king of the 15th Dynasty.

¹⁸² Ryholt 1997, 50. 120; Ryholt 2010, 124; Krauss 1998, 41.

¹⁸³ Manning et al. 2014, 1171. For the position of Khyan in the ongoing chronological debate about high and low chronology, see also: Manning 1999; Manning 2014; Bietak 2003; Bietak – Höflmayer 2007; Höflmayer 2012.

¹⁸⁴ In the following pages, these three contexts will be referred to as »Khyan context/s«.

is the composition of their sealings corpora: all show Egyptian Late Middle Kingdom, Egyptian Second Intermediate Period series and Late Palestinian series motifs¹⁸⁵.

The tools used to evaluate the artefacts from these contexts in order to suggest a dating are pottery and seal typologies that have already been established for the late Middle Kingdom and the Second Intermediate Period. In addition to these typologies, Tell Edfu has resorted to a further technique for the context in question (US 2654): the analysis of several ¹⁴C samples¹⁸⁶.

In the following section these tools (scarab and pottery typologies as well as radiocarbon dating) and their limitations within the evaluation process will be briefly considered, together with the final interpretation of the Khyan contexts at both sites.

8.1 Khyan contexts and the difficult comparison between Lower and Upper Egyptian pottery seriation

The Khyan context at Tell Edfu contains a corpus of *cretulae* that includes sealings bearing the impressions of a king connected to the mid-13th Dynasty, Sobekhotep IV¹⁸⁷; Late Middle Kingdom private-name seal impressions¹⁸⁸; impressions of the Hyksos ruler Khyan¹⁸⁹; and finally impressions of the so-called Palestinian scarabs series¹⁹⁰. This context seems also to show ceramic material of the Late Middle Kingdom (second half of the 13th Dynasty) as well as shapes that can be assigned to the early Second Intermediate Period¹⁹¹. Based on the ceramic evidence, the excavators positioned the abandonment of the administrative complex of Tell Edfu »within the second half of the 13th dynasty, which coincides with the early Second Intermediate Period«¹⁹².

Apart from the proposed overlap of the second half of the 13th Dynasty and the early Second Intermediate Period, which cannot be estimated with precision, their interpretation of the abandonment of the building within the second half of the 13th Dynasty might not be the sole possible explanation. In fact, as Anne Seiler points out about the pottery of the second third to the end of the 13th Dynasty¹⁹³ from the tombs of Dra' Abu el-Naga, the changes within the pottery horizon do not respect the usual Upper and Lower Egyptian division¹⁹⁴ during the late Middle Kingdom and the Second Intermediate Period, but they rather include regional developments appearing in specific areas. Furthermore, in the Theban region, the production of typical early 13th Dynasty shapes continues longer than in Lower Egypt and the innovations in the latter area with regard to the morphology, which were created during the mid-13th Dynasty, never affected Upper Egypt¹⁹⁵. These considerations about pottery developments imply also the possibility of a slightly later date for the Khyan context at Tell Edfu than the one proposed by its excavators. The unsynchronized pottery development of this period in Egypt¹⁹⁶ should generally prevent us from relying automatically on the fact that a context with Late Middle Kingdom-Early Second Intermediate Period ceramic material found in Upper Egypt corresponds chronologically to a similar ceramic assemblage discovered in Lower Egypt.

¹⁸⁵ Area R/III Khyan contexts: see information related to Late Palestinian series examples presented above. Area F/II Khyan context: Late Middle Kingdom and Second Intermediate series examples are published in Sartori 2009, 284–288. I owe the information about the presence of Late Palestinian series examples in F/II to Daphna Ben-Tor and I am very grateful to Manfred Bietak for kindly letting me include and use this information in the present article. Tell Edfu Khyan context: see Moeller et al. 2011.

¹⁸⁶ Moeller et al. 2011, 97.

¹⁸⁷ Moeller et al. 2011, 103. 110.

¹⁸⁸ Moeller et al. 2011, 102. 104. 110–111.

¹⁸⁹ Moeller et al. 2011, 97. 109–110.

¹⁹⁰ Moeller et al. 2011, 103. 110.

¹⁹¹ Moeller et al. 2011, 99; Ayers 2011, 116.

¹⁹² Moeller et al. 2011, 100.

¹⁹³ Seiler 2012, 316.

¹⁹⁴ Seiler 2012, 319.

¹⁹⁵ Seiler 2010, 42–43.

¹⁹⁶ Bourriau 2010, 11. 13. 32. 35.

8.2 The Khyan contexts and the presence of Late Middle Kingdom seal impressions

The presence of Late Middle Kingdom series seal impressions concerns the three contexts mentioned above (i.e. L473 and L81, respectively from area R/III and F/II at Tell el-Dab^a, and US 2654 from Tell Edfu); however, various explanations may exist for their presence in each of the contexts.

According to the extremely mixed composition¹⁹⁷ of the administrative material found in both Tell el-Dab^a Khyan contexts (L473 and L81) it appears reasonable to consider them as tertiary. Therefore, any chronological association between earlier and later material belonging to these contexts should be carefully considered. On the other hand, the sealings found in the court of the administrative building at Tell Edfu and their grouping in quite large clusters according to their impressions¹⁹⁸ may suggest that this material is the result of one or more administrative cycle/s¹⁹⁹, or with the dispatch of one – or more (?) – delivery of goods from the north to Tell Edfu²⁰⁰. As formerly mentioned, unlike Tell el-Dab^a, Tell Edfu offers evidence for an earlier stage within the course of the completion of the administrative process. The nature of the context from Tell Edfu, which in the worst case might be labelled as secondary, may thereby allow possible additional associations within the material. The administration of the 12th Dynasty and its practices were maintained during the Late Middle Kingdom and the Early Second Intermediate Period²⁰¹, through the administrative system of the 13th Dynasty royal residence at Itj-tawy²⁰², remaining most likely almost unchanged at least until the relocation of the court to Thebes²⁰³ or the rise of the 16th Dynasty at Thebes²⁰⁴. Despite the transformations affecting the time span between 13th and the 17th Dynasty²⁰⁵, information about the administration during this period is inadequate and does not allow a detailed understanding of all its features in the different dynasties²⁰⁶. The first clear

¹⁹⁷ This heterogeneity lies not only in the different chronological attribution (Late Middle Kingdom/Early or Late Second Intermediate Period) and source (Egypt or Palestine) of the seals, but also in the impossibility of identifying congruous groups of sealings referring to administrative operations/cycles within the contexts.

¹⁹⁸ Moeller et al. 2011, 96.

¹⁹⁹ The excavators suggest a single administrative cycle: Moeller et al. 2011, 100.

²⁰⁰ Moeller et al. 2011, 100; Moeller 2012, 123.

²⁰¹ Ben-Tor 2007, 6; Ben-Tor 2003, 240. About the adoption of the Egyptian administrative practice by the 14th Dynasty see generally Ryholt 1997, 109–114.

²⁰² Ben-Tor 2007, 6; Ben-Tor 2010, 92. For different theories about the relocation of the court from Itj-tawy to Thebes before or after the end of the 13th Dynasty, see generally Ryholt 1997, 79–80. Against the relocation of the court of the 13th Dynasty to Thebes and in favour of an overlap between the dynasties ruling at Itj-tawy and Thebes, generated rather by an independent rise of power from the local Late Middle Kingdom administrative structures of Upper Egypt, see Ilin-Tomich 2014. About the estimation for the advent of the 16th Dynasty see Allen 2010, 4.

²⁰³ Ben-Tor 2007, 6.

²⁰⁴ The 16th and the 17th Dynasties show however a continuity with the previous Late Middle Kingdom administration of the southern nomes (Ilin-Tomich 2014, 145. 158–159).

²⁰⁵ With the end of the Middle Kingdom and during the 16th and 17th Dynasty, although the office of overseer of the sealed things continues to be part of the administration, the practice of sealing goods seems – according to the archaeological data – to decline (Shirley 2013, 555) and a spontaneous decentralization of the formerly centralized administration can be noticed. Tell el-Dab^a and Tell Edfu offer examples for the continuation of the practice of sealing after the 13th Dynasty although other centers along the Nile, unexpectedly, do not (Elephantine, for instance: von Pilgrim 1996, 253; Shirley 2013, 555 or Thebes: Polz 2007, 13–14). However, the lack of evidence is not always evidence of absence and this is confirmed, e.g., by Tell el-Dab^a, where the recovery of large quantities of sealings was possible only after the introduction of sieving within the excavation activities (Sartori 2009, 283). About other changes in the administration in the Second Intermediate Period, see e.g. von Pilgrim 1996, 253 and further references in his n. 788; Grajetzki 2010, 305. 308–310; Ilin-Tomich 2014, 155.

²⁰⁶ About the chronological placement and succession of 13th Dynasty high officials, see Grajetzki 2000 and Grajetzki 2010, 306; about the maintenance of the old structures or the whole reorganization at the lower levels of the administration between the late 13th and the 17th Dynasty, see Grajetzki 2010, 310; about the absence of private-name seals except for kings and treasurers in the 14th Dynasty, see Ryholt 1997, 110; about the difficulties in the identification of 15th Dynasty officials, see Quirke 2004, 186–188; about the scarce knowledge concerning many of the officials of Theban dynasties and the difficulty of dating precisely their highest administrative titles, see Grajetzki 2000, 262–263 and Ilin-Tomich 2014, 152. 154; about the general difficulties hampering the debates concerning the administration of this period, see Shirley 2013, 522.

symptoms of transformation within the administrative structures inherited from the Late Middle Kingdom appear in the north with the rise of the 15th and in the south from the 17th Dynasty²⁰⁷ – beginning of the 18th Dynasty²⁰⁸ and the question that arises is to what extent can we be really accurate in defining the chronological lower limits of the Late Middle Kingdom seal typologies within the whole of Egypt?

The Late Middle Kingdom *cretulae* with private-name seal impressions found at Tell Edfu may be useful in this respect. Among the published examples of names and titles²⁰⁹, only the impressions bearing the name of the »seal-bearer«, »high steward«, »king's retainer Redienptah«²¹⁰ are found elsewhere in Egypt. These are widespread in Egypt (apparently concentrating mostly in Upper Egypt²¹¹) and are found in the Levant²¹². However, although attested elsewhere, this official cannot be exactly dated and he is generally ascribed to the end of the 12th–13th Dynasty by Wolfram Grajetzki²¹³, not offering precise chronological links.

The royal-name seal impressions of Sobekhotep IV are closely linked to the mid-13th Dynasty²¹⁴ and at Tell Edfu they were found together with the sealings of Khyan, so far associated with the first or the second half of the 15th Dynasty. The imbalance between the quantities of seal impressions of Sobekhotep IV (9) and of Khyan (44)²¹⁵ found at Tell Edfu is evident. Although this circumstance is not unequivocally interpretable as follows, the possibility that the *cretulae* of Sobekhotep IV are residual²¹⁶ or that – as documents probably having a higher administrative value²¹⁷ than the *cretulae* not sealed by royal-seals – they might have been filed and kept for a longer period is not to be excluded *a priori*²¹⁸.

²⁰⁷ Quirke 2004, 186; Shirley 2013, 522; Shirley citing Polz about changes and renewal within cult and administration during the 17th Dynasty: Shirley 2013, 554–555. 562. 564–565; Polz 2007, 305–307.

²⁰⁸ Ben-Tor 2007, 45 citing Tufnell 1984 as well.

²⁰⁹ Moeller et al. 2011, 102. 104. 110–111.

²¹⁰ Moeller et al. 2011, 110.

²¹¹ Moeller et al. 2011, 110; Shirley 2013, 536.

²¹² Shirley 2013, 536.

²¹³ Grajetzki 2000, 79. 101.

²¹⁴ Sobekhotep IV is dated to ca. 1732–1720 B.C. by Ryholt (Ryholt 1997, 408) or to ca. 1709–1701 B.C. according to Hornung et al. 2006, 492.

²¹⁵ Moeller et al. 2011, 96. 110.

²¹⁶ For the common reuse of scarabs during the Late Middle Kingdom, Second Intermediate Period and New Kingdom see: Ben-Tor 2007, 6–7. 45. 48 n. 177; 72. For the possibility of appropriation and reuse of older seals see: Bietak 2004, 54 and Moeller 2012, 121. Against the aprioristic assumption that scarabs are »necessarily contemporary with the context in which they are found« see Ryholt 2010, 124. For the reuse of Middle Kingdom royal scarabs/seals: Williams 1977, 137–138. For seal re-use in the ancient Near East see generally: Collon 2005, 120–122.

²¹⁷ The function of private/royal-name scarabs is still controversial (Ben-Tor 2004, 26). Royal-name scarabs were not produced before the 12th Dynasty (Ward 1984, 151), the function of scarab seals having been previously executed by cylinder seals. Given the original amuletic purpose of scarabs, some scholars do not recognize the administrative value of private/royal-name scarabs, whereas other do. For the acknowledgment of an administrative value to royal seals, see generally the scholars listed in Ben-Tor 2004, 31 n. 90. Against the attribution of an official meaning to royal-name scarabs, see Ben-Tor herself (Ben-Tor 2004, 26) and the studies and works quoted by her in Ben-Tor 2004, 31 n. 92. Since the apotropaic function of these objects remains in the background of their secondary – administrative – use, scarabs (royal-name scarabs included) cannot be unequivocally interpreted as to their purpose (Ben-Tor 2004, 26). The presence of sealings bearing royal-name scarab seal impressions (although not in a large number, Ben-Tor 2004, 26) attest their actual use within the administration. However, defining to what extent these private/royal-name scarabs were actually used as official/royal tools is a more difficult task: therefore, an interpretation that includes both their official and their unofficial character is advisable.

²¹⁸ From the perspective of royal administrative records and their survival, it might be also significant that after the 24-year reign of Merneferre-Aya – who ascended the throne four reigns after Sobekhotep IV – the administration seems to collapse (Ryholt 1997, 298–299) as well as apparently the production/use of royal seals (Ryholt 1997, 298–299; Grajetzki 2010, 305).

8.3 The Khyan contexts and the presence of Late Palestinian series seal impressions

The final common feature in the composition of the Khyan contexts at Tell Edfu and Tell el-Dab^ca is the presence of examples that can be assigned to the Palestinian series. The examples from Tell el-Dab^ca are attributable to the Late Palestinian series²¹⁹; the excavators of Tell Edfu attribute their Palestinian examples²²⁰ to Christa Mlinar's TD type IV²²¹, and Daphna Ben-Tor recognizes in them Late Palestinian series features²²².

This type becomes popular at Tell el-Dab^ca in stratum E/1²²³, nevertheless the earliest example categorized by Mlinar as belonging to this type²²⁴ is a scarab that was found in tomb 6 of area A/II of Tell el-Dab^ca²²⁵ and she ascribed it to stratum E/2²²⁶. Unlike Mlinar's attribution of it to stratum E/2, the excavator includes this tomb – according to its stratigraphic relations – to the transitional phase between strata E/2–E/1²²⁷, although stating that – according to its finds – the tomb might already belong to the following stratum E/1²²⁸. Similarly, such a slight chronological shift between stratum E/2 and E/1 in the dating of the Late Palestinian series is noticeable in Daphna Ben-Tor's seriation. Ben-Tor dates the Late Palestinian series according to their first appearance within Group III of the Jericho tombs²²⁹ and equates this group with stratum E/2 of Tell el-Dab^ca, where the same Canaanite pottery assigned to Jericho Group III is attested²³⁰. Therefore, given the correspondence between stratum E/2 and the beginning of the Hyksos Period²³¹, Ben-Tor proposes its contemporaneity with the 15th until beginning of the 18th Dynasty for the chronological extension of the Late Palestinian series²³². While the lower absolute date for the chronological boundaries of this series (1500 B.C.) has never been adjusted, the beginning of this group was originally dated to 1630 B.C.²³³ and was progressively raised to 1640 B.C.²³⁴ and currently to 1650 B.C.²³⁵. However, the correlation between Jericho Group III and Tell el-Dab^ca pottery is actually only observable in the final part of stratum E/2²³⁶. In fact, such a connection is essentially based on the presence of a Piriform 2b juglet with three lozenge-shaped zones of decoration in one of the Jericho tombs of Group III²³⁷ (i.e. tomb A 34, phase 4²³⁸), the Egyptian equivalent of which (Piriform 2a juglet with three lozenge-shaped zones) appears in Tell el-Dab^ca at the earliest in late

²¹⁹ At least the examples from area R/III.

²²⁰ i.e. 82 *cretulae* stamped by the same seal, which are part of the corpus of 333 sealings discovered in US 2654. Moeller et al. 2011, 110.

²²¹ Dated to the 1st half of the 15th Dynasty: Mlinar 2004, 134.

²²² Moeller et al. 2011, 110.

²²³ C. Mlinar in: Bietak et al. 2001, 179; Ben-Tor 2007, 69.

²²⁴ Mlinar 2001a, TD 402, 72. 261 (here appearing as type IIIa and IIIb); Mlinar 2001b, 247–251.

²²⁵ Area A/II, square m/11, tomb 6: Bietak 1991a, 155–160.

²²⁶ It is worth mentioning that TD 402 is the sole example of type IV that Mlinar attributed to stratum E/2. In fact, the rest of the seals grouped by Mlinar into this category originates from stratum E/1 and E/1–D/3: Ben-Tor 2007, 69 and n. 347–349.

²²⁷ Bietak 1991a, 155.

²²⁸ Bietak 1991a, 156.

²²⁹ Ben-Tor 2010, 95–96; Ben-Tor 2007, 155; Ben-Tor – Bonfil 2002, 38–39. 44.

²³⁰ »Canaanite pottery of the type assigned to Group III at Jericho was found at Tell el-Dab^ca in stratum E/2«: Ben-Tor 2010, 96.

²³¹ Stratum E/2 is said to correspond to the beginning of the Hyksos rule (i.e. 15th Dynasty [?]) and the period shortly before: Bietak 1991b, 55.

²³² Ben-Tor 2007, 155.

²³³ Ben-Tor 2007, 155.

²³⁴ Ben-Tor 2010, 93.

²³⁵ Moeller et al. 2011, 110.

²³⁶ Bietak 1991b, 55.

²³⁷ Bietak 1991b, 55 (quoted as Kenyon, K. 1960, *Archaeology in the Holy Land*, London, 362, fig. 142:5. Actually: Kenyon, K. 1960, *Excavations at Jericho*, vol. 1: *The Tombs Excavated in 1952–54*, London 1960, 362 fig. 142, 5).

²³⁸ Kenyon 1960, 352–368.

stratum E/2²³⁹, becoming common during stratum E/1²⁴⁰. Because of this discrepancy between the archaeological record and the chronological conclusions reached both by Mlinar and Ben-Tor about the beginning of the Late Palestinian series, I personally consider the end of stratum E/2 – beginning of stratum E/1 is considered as a more suitable stratigraphic correspondence for setting the relative chronology concerning the beginning of this series.

At this stage, it is worth mentioning the important fact that the grouping and dating of both Ben-Tor's Palestinian series scarab seals and Mlinar's type IV are built on the stratigraphy of Tell el-Dab^ca, on its pottery sequence and on its phasing²⁴¹. The employment of these scarab seriations as a working tool means an implicit connection with the phasing of Tell el-Dab^ca and, in terms of absolute chronology, it means also the adoption of the low chronology²⁴². For this reason, it may be difficult to find corroborations for a dating aiming at the high chronology using the chronology of these typologies, as in the case of the Palestinian series examples from Tell Edfu²⁴³.

The latest datable sealings within the Tell Edfu Khyan context appear therefore to be the examples of the Palestinian series. The formation of the Khyan deposit at Tell Edfu should consequently be dated according to them, rather than to further design or royal-name seal impressions found in it.

Based on the ceramic material, the formation of the earliest Khyan context from the area R/III may be dated to early stratum E/1 of Tell el-Dab^ca. Here, as at Tell Edfu, the Late Palestinian series sealings found in this context allow us to state that the deposit formation could not have happened before the transition phase between stratum E/2–E/1.

The ceramic material found in the Khyan sealing context from area F/II dates back to a time span which extends between stratum E/1 and D/3²⁴⁴ or even D/2²⁴⁵ at Tell el-Dab^ca. The presence of Late Palestinian series seal impressions within this context confirms this date for the deposit formation, not allowing further conjectures about an earlier or a later date for this ruler within the 15th Dynasty.

However, these acknowledgements do not supply any information about the absolute chronology but rather only about the relative sequence.

8.4 Khyan and radiocarbon dating

The excavators of Tell Edfu interpreted the find assemblage of the Khyan context as supporting an overlap of the 13th with the 15th Dynasty²⁴⁶, or at least of an earlier date for king Khyan²⁴⁷. This earlier date would match with the radiocarbon dating of the Tell el-Dab^ca strata associated in area F/II with this king (end of stratum E/1 and beginning of stratum D/3²⁴⁸) and therefore support the recourse to a high rather than a Low chronology for Egypt²⁴⁹.

²³⁹ Bietak 1991b, 55.

²⁴⁰ Aston – Bietak 2011, 556.

²⁴¹ Mlinar 2004, 107; Ben-Tor 2003, 243: »Establishing a typology of the Palestinian series depends first and foremost on the absolute chronology of the Middle Bronze Age phases in this region, which can only be based on synchronisms with Egyptian chronology. It is now largely accepted that the most secure synchronism for this period is provided by the Egyptian and Canaanite pottery found together in stratified deposits at Tell el-Dab^ca. The dates proposed by Bietak for the occupation levels at Tell el-Dab^ca are based primarily on the Egyptian pottery found at the site, which was compared with ceramic assemblages from Dahshur dated by Dorothea Arnold.«

²⁴² Mlinar 2004, 107.

²⁴³ Moeller et al. 2011, 110.

²⁴⁴ Aston 2012, 159–162.

²⁴⁵ Kopetzky 2010, I, 125 n. 742.

²⁴⁶ Moeller et al. 2011, 107. 109.

²⁴⁷ Moeller et al. 2011, 107. 109; Manning et al. 2014, 1171–1174.

²⁴⁸ According to the date of pit L81 given by Aston: Aston – Bader 2009, 20; Aston 2012, 159–162; Bietak et al. 2012/2013, 24; Manning et al. 2014, 1173–1174.

²⁴⁹ Moeller et al. 2011, 107–109; Manning et al. 2014, 1171–1173.

The earliest Khyan context at R/III may be dated earlier than L81: to the early stratum E/1. Judging from the phase transition chart by Manning et al. 2014²⁵⁰, there is a slight overlap of the Bayesian modelled date ranges given for the Tell el-Dab^ca transitional phase E/2–E/1 after Kutschera et al.²⁵¹ with the Tell Edfu ¹⁴C dating of the context associated with this king. According to the chronological timeline given in the above-mentioned chart, such an overlap seems to be approximately translatable into a short timespan around 1700 B.C. This would mean a dating for Khyan that is actually higher than the 80 years proposed by Moeller – Marouard²⁵² and Manning et al.²⁵³. Up to now²⁵⁴, the Khyan-related phase at Tell el-Dab^ca has been considered to be the transition between stratum E/1 and D/3²⁵⁵. Since the earliest Khyan-related context at Tell el-Dab^ca (L473, R/III) is now dated to the transition stratum E/2–E/1 – early E/1, the recourse to the ¹⁴C dating given for this transition would suggest a date for Khyan that is at least 100 years earlier than the previously proposed one. The question is whether the Egyptian absolute chronology and the connected Levantine chronology are able to incorporate this adjustment.

Having considered some of the possibilities of measurement errors innate in our tools, which may lead to the misrepresentation of the archaeological data, we should rather test and improve them with the newly acquired data, rather than consider them the test itself.

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9 Conclusions

Not a single Khyan sealing found at Tell el-Dab^ca was from a primary context. This is true for both area R/III and for the so-called Khyan's palace in area F/II. The Khyan contexts found in the latter area are not connected directly to the phases of this large building. Even if they were found in good or contemporary contexts, this would not allow an *ad-hoc* dating of the structure, as royal name sealings are often found in later periods and contexts and therefore do not necessarily permit the connection of buildings with kings²⁵⁶.

Sealings bearing the name of king Khyan are attested at Tell el-Dab^ca in contexts dating to the following relative strata: E/1, D/3 and D/2.

Depending on the reliability of the Khyan contexts uncovered up to now at Tell el-Dab^ca, the data allow several hypotheses about the relative chronology and the length of the reign of this Hyksos ruler:

1. Khyan may have reigned in the earlier 15th Dynasty, embracing stratum E/1, or possibly already the final phase of stratum E/2 (therefore only his seal impressions found in contexts attributed to stratum D/3 and D/2 would be residual).
2. Khyan may have reigned in the first half of the 15th Dynasty, covering stratum E/1 and D/3 (therefore the seal impression found in the earliest context at Tell el-Dab^ca would be almost contemporary with its context and the sealings in stratum D/2 would be residual).
3. Khyan's reign may have covered a period of time including strata E/1 to D/2. This does not mean however that he reigned longer in terms of years, but simply that one or more of the phases/strata (E/1-D/3-D/2) may have lasted for a shorter time than currently estimated. Another possibility connected to this third hypothesis is that his reign lasted until the very beginning of Tell el-Dab^ca stratum D/2.

²⁵⁰ Manning et al. 2014, 1171–1173.

²⁵¹ Kutschera et al. 2012.

²⁵² Moeller et al. 2011.

²⁵³ Manning et al. 2014.

²⁵⁴ Kutschera et al. 2012, 408.

²⁵⁵ Approximately 1600–1580 B.C., according to the chronological chart in Bietak 2010a.

²⁵⁶ Bietak 2004. See also above (§ 2.3.) and Forstner-Müller – Rose 2012, 184.

In the evaluation of the archaeological data from Tell el-Dab^ca, it should be remembered that a particular problem is the association of the relative strata of the site with absolute chronology²⁵⁷. The Tell el-Dab^ca strata cannot be directly translated into absolute years. The applied chronological model is based on a statistically-estimated average of 30 years per stratum derived from the assumed lifespan of mud-brick architecture under the environmental conditions of the Nile Delta. These postulated datum lines connecting the relative chronology of Tell el-Dab^ca with the absolute chronology in Egypt²⁵⁸ have been criticized²⁵⁹.

An additional problem is that the chronological framework of the strata all over Tell el-Dab^ca derived from the associated pottery. It is not possible to link any strata/phases to reigns of kings by means of epigraphy²⁶⁰. Thus these new finds do not supply more information on the regnal length of this king nor any information or possible links to absolute chronology.

However, Khyan was quite probably one of the earlier kings of the 15th Dynasty (before Apophis and Khamudi), although the new finds do not suggest his definitive position within the 15th Dynasty.

Another crucial question is the length of the Hyksos Period, which is not certain and might have either lasted 108 years or, as Kim Ryholt and Thomas Schneider have recently suggested²⁶¹ much longer. Then there would be no discrepancy between the historical chronology and the ¹⁴C dates²⁶².

In consideration of these issues, it may be concluded that the available data about Khyan are insufficient or not sufficiently comprehensible to rely completely on them. Therefore caution is required in attributing a specific position to this king for measuring and corroborating absolute chronologies.

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²⁵⁷ An extensive paper on the topic of the problem of Tell el-Dab^ca and the absolute chronology is in preparation by I. Forstner-Müller.

²⁵⁸ Bietak 2013, 80.

²⁵⁹ Kutschera et al. 2012; Manning et al. 2014, 1174. For the problem of the Tell el-Dab^ca phases/strata and absolute chronology see Forstner-Müller – Rose 2012, 184 and see also F. Höflmayer's contribution to this volume. See especially Höflmayer's argument on the problem of the (non-existent) datum lines in Tell el-Dab^ca/Avaris linking the relative chronology of Tell el-Dab^ca to the absolute chronology, which Forstner-Müller is following.

²⁶⁰ Against D. Aston's contribution to this volume.

²⁶¹ Ryholt 140 (–149) years, Schneider 160 (–169) years or even 180 (–189) years, see K. Ryholt and T. Schneider same volume.

²⁶² I. Forstner-Müller is following here D. Aston's schema x (Aston, same volume) assuming T. Schneider (same volume) is correct in his argument that the Hyksos Period lasted 180 (–189) years.

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Irmgard Hein

Second Thoughts on Cypriot Pottery and First Appearances

Introduction

Finds of Cypriot pottery from a time range of the Egyptian Middle Kingdom until the New Kingdom in the Eastern Mediterranean were the subject of several specific studies in the last three decades, in particular by Robert Merrillees¹, Louise C. Maguire² and Kathryn Eriksson³. The interest in the distribution of imported wares, in horizontal and vertical archaeological axes was enhanced by the large SCIEM 2000 project. As part of this project, a central topic focused on the interpretation of imported material in archaeological contexts in particular the ›first appearance‹ of wares and the value for chronological studies. Also more specific ware groups have become the subject of investigation, for example the Cypriot Bichrome Wheel-made ware⁴.

The correlation of the levels of different sites is often facilitated via the identification of the Cypriot pottery occurrence, which is diffused in the Eastern Levant. It plays an important role for the correlation of strata, however it has to be seen always in context with the local ceramics, which are the base for dating the levels.

The Hyksos Period in Tell el-Dab^a and ^oEzbet Helmi is in general identified for the levels E/2–D/2, and a change in material culture correlated with the beginning of the Hyksos Period was traced in stratum E/2⁵. However, the end of the Hyksos Period remains weaker when we are searching for a significant change in the material culture. Such a change is obvious in the levels in ^oEzbet Helmi, where stratum C/3 shows clearly different material compared to stratum D/2, which is regarded to be the last ›pure Hyksos‹ phase, and this change becomes obvious in the occurrence of the imported pottery. The detailed analysis of the associated material is a necessary tool in order to establish the chronological framework for the find positions of the documents and finds from the Hyksos Period. However, a transitional phase (str. D.1) has to be taken into account, since we should not assume that the Egyptian army responsible for the siege and victorious conquest of Avaris brought their own vessel equipment from Upper Egypt in large quantities. It has to be merely assumed that local Delta potters were forced to produce the equipment for the army, and it can be hardly imagined that the potters changed immediately the production to ›Ahmose style‹ shapes⁶. We have to consider a slow development and continuation of the Second Intermediate Period repertoire at the beginning of the 18th Dynasty in the Delta, whereas the clear change takes place in stratum C/3.

With this contribution I want to discuss some ideas and interpretations about the distribution and appearances of some imports. The basics are shaped by the contexts from the Second Inter-

¹ Merrillees 1968; Merrillees 1974.

² Maguire 2009.

³ Eriksson 1993; Eriksson 2007a and 2007b.

⁴ Åström 2001.

⁵ See Bietak et al. 2001.

⁶ Also Bourriau 1997, 165, has had same idea for Memphis at the beginning of the 18th Dynasty: »It seems inherently implausible that the ceramic workshops supplying Memphis should suddenly switch to a new kind of pottery at the beginning of a new dynasty.«

mediate Period and Early New Kingdom in Tell el-Dab^a and ^cEzbet Helmi, where the largest amount of Middle and Late Bronze Age pottery from Cyprus in Egypt (up to date) was found⁷.

The importance of Cypriot pottery in the eastern Levant

The appearance of Cypriot pottery in the Ancient Near East and in Egypt is a very large topic that offers a wide range for various hypotheses, in particular in terms of chronology, and trade connections. It is widely known, that the Cypriot Bronze Age culture did not develop its own writing system before the Mycenaean influence reached the island and the development of the Cypro-Minoan script came into being⁸. Therefore the sources for developing a Cypriot chronology is also depending on the situation in the neighboring areas in the Eastern Levant, stretching from the Anatolian coast along the Syrian, Lebanese and Canaanite areas, down to Egypt, and even upstream of the Nile river into the area of ancient Nubia, or modern Sudan⁹. The investigation of the Cypriot wares and their distribution in the Eastern Mediterranean was already the subject of several publications. In particular the studies of Paul Aström about the chronology¹⁰ have raised attention, and led to the development of a special research program¹¹ between 1999 and 2011. The Cypriot pottery has played a prominent role in several research projects. Some studies were devoted to distinctive wares or the stratigraphic appearance and context of specific ceramics in order to develop local chronologies. The project »Cyprus« and the »First Appearance« project, or the project »Stratigraphie Comparée« have been closely cooperating in this matter. In many cases the same material was used for the critical analysis, because archaeologically reliable sites with a detailed stratigraphic record containing Cypriot pottery in layers of secure archaeological contexts are limited. Robert Merrillees has already pointed out in the 1960ies the large potential offered by the analysis of the Cypriot wares and in particular the Base Ring ware and the Red Lustrous Wheel-made ware from Egyptian contexts¹², and this idea was followed by other scholars, such as Kathryn Eriksson, for example, in relation to the Red Lustrous Wheel-made ware¹³. The Lustrous wares in general have been investigated, as well as the White Slip wares gained attention in a conference in Nicosia in 1998¹⁴, in addition to the Bichrome Wheel-made ware and the Base Ring ware which were discussed in a meeting in Stockholm in 2000¹⁵. Other investigations have been contextualizing the materials in chronological sequences from specific sites, such as the study by Celia Bergoffen that deals with the analysis of the Cypriot wares in southern Canaan and Alalakh¹⁶. Very recently, in 2015, a profound analysis about the Cypriot pottery in the northern Levant (Syria and Lebanon) was presented by Sarah Vilain¹⁷.

It has to be emphasized, that the critical analysis of the regional or local pottery is without doubt the backbone for the development of the vertical sequences within a site. Dealing with Levantine sites, in several cases the archaeological contexts are not clear, the sequences are disturbed or destroyed, or the publications are not fully conclusive and therefore the distinctive

⁷ Cf. Hein 2001a and 2009; cf. Manning 2001.

⁸ Recently see Ferrara 2012, and Ferrara 2013.

⁹ Distribution of Cypriot pottery can be traced in Nubia f. i. in the Second Intermediate Period/New Kingdom cemeteries of Aniba (Steindorff 1937), currently reinvestigated in a project by the University of Leipzig, and more upstream in the area of the Second Cataract investigated by the Scandinavian Joint Expedition in the 1960 s. Cf. Holthoer 1977; Säve-Söderbergh – Troy 1991.

¹⁰ Aström 1989.

¹¹ The Special Research Programme SCIEM 2000 was funded by the FWF (Austrian Science Fund), under the patronage of the UNESCO, first speaker M. Bietak, second speaker W. Kutschera, and included up to 14 subprojects. The target was to synchronize the cultures of the Eastern Mediterranean in the 2nd millennium B.C.

¹² Merrillees 1968.

¹³ Eriksson 1993; Eriksson 2007b. The Red Lustrous Wheel-made ware is commented below.

¹⁴ For the Lustrous wares cf. Hein 2007, for the White Slip wares see Karageorghis 2001.

¹⁵ Åström 2001.

¹⁶ Bergoffen 2005, and Bergoffen (forthcoming).

¹⁷ Vilain 2015.

chronological attribution of some finds have remained in the grey zones of interpretation and did not lead to an accurate chronological evaluation of the relevant data¹⁸. On the other hand, recent investigations have resulted in the change of our interpretation of some wares, such as the Red Lustrous ware for instance, which was highly debated in terms of its origins, and the present status of investigations considerably differs from the situation 15 years ago (see below).

This situation gives us a lot of reasons for a critical review of »First appearances« for some wares, and although the final clue is not yet present, it is moreover questionable if such a final clue can ever be found, since every new excavation can change the framework of our ideas.

A comparative chart was one of the outcomes of the SCIEM 2000 project, showing the appearance of specific Cypriot wares in several regions of the Eastern Mediterranean (see fig. 1). The chart is the result of a compilation of results from several projects, such as from the »First Appearance project«¹⁹, the »Cyprus project« and the »Egypt project«, which have been published in several reports of the general research program²⁰. The objective was the comparison of specific key sites in the Eastern Levant, all of them showing a rather long occupation and stratigraphy for the 2nd millennium B.C. All of the sites are more or less located near the Levantine coast, and Cypriot wares have been found in stratigraphic contexts. Amongst them are Tell el-Dab^ca, Tell el-^cAjjul and Ashkelon, Lachish, Tell Arqa and Alalakh²¹. The time span covers the last phase of the Middle Bronze Age (MB III) and the Late Bronze Age phases LB I and II.

In this respect we have to add the very recent comparative study by Höflmayer et al.²², where the authors favor a start for the MB I approximately 200 year earlier based on new radiocarbon data from Tell el-Burak, Tell el-Dab^ca and Tel Ifshar, and expressing a preference for a higher chronology of the MB phases.

The classified Middle Cypriote wares comprise White Painted Cross Line (WPCL), White Painted Pendent Line (WPPL), Red on Black (RoB), Red Polished (RP), WP V (White Painted V), Plain White Hand-made (PWHM), Proto White Slip (PWS) and White Painted VI (WP VI); the Late Cypriote (LC) wares are the Lustrous wares Black Lustrous Wheel-made ware (BLWmW), Red Lustrous Wheel-made ware (RLWmW) and White Lustrous Wheel-made ware (WLWmW); MOC (Monochrome ware), White Slip I (WS I) and White Slip II (WS II), Base Ring I ware (BR I) and Base Ring II ware (BR II), and Plain White Wheel-made ware (PWW), and also the Bichrome Wheel-made ware (BICWmW), as well as Bichrome Hand-made ware (BICHmW) were included²³.

Analyzing this chart, we recognize a striking concordance for the simultaneous appearance of some Cypriot wares. For instance the Middle Cypriot White Painted Cross Line (WPCL) ware shows a simultaneous beginning of appearance in Tell el-Dab^ca, Tell el-^cAjjul and Ashkelon²⁴, that can be assigned at Tell el-Dab^ca to stratum G, phases 1–3, which has been dated to the 13th Dynasty²⁵. In the same way, also the WPPL-ware shows a synchronized line that runs almost horizontal between Tell el-Dab^ca, Ashkelon and Tell Arqa indicating a simultaneous appearance. Therefore, we tend to interpret the WPPL and the WPCL wares as an indication for a contempo-

¹⁸ For instance the interpretation of the chronology for Tell el-^cAjjul is still controversial and debatable, cf. Petrie's volumes *Ancient Gaza, 1931–1934*: Bergoffen 2001a and b; Robertson 1999; Stewart 1974.

¹⁹ Bietak 2000.

²⁰ E.g. used in Bietak – Höflmayer 2007, 18 fig. 4. A more recent and amended version with the comparison of five sites in the east Mediterranean was then published in Bietak 2013; cf. Kutschera et al. 2012.

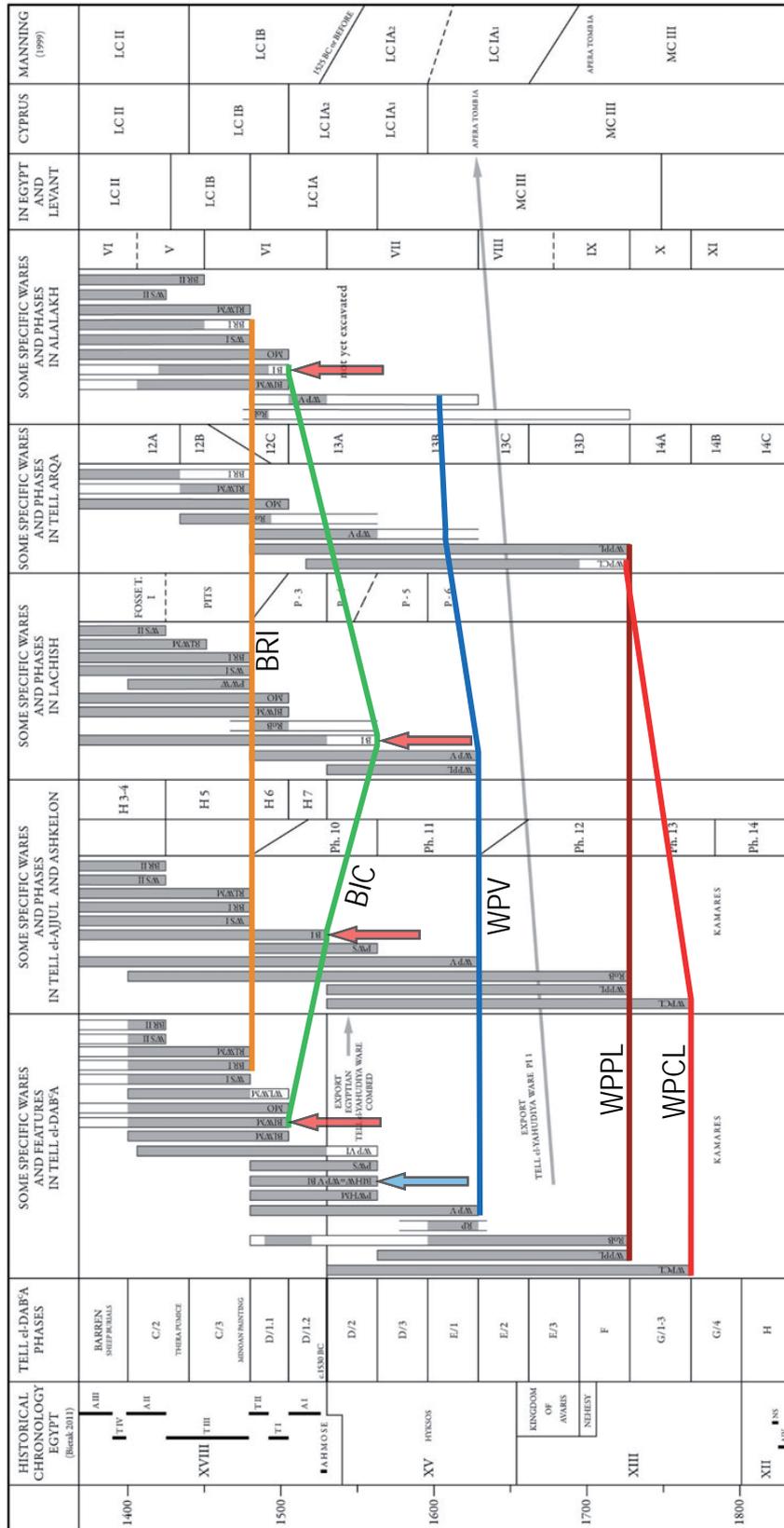
²¹ The compiled graphic was based on the results of M. Bietak, I. Hein, K. Kopetzky, L. Stager, J. P. Thalman, A. Yener and E. Kozal. Bietak 2013, 62, quotes in the text: »Especially significant was the repetitive pattern of the first appearance of Kamarens ware and Middle and Late Cypriot wares in the stratigraphy of a series of sites studied so far (Figure 8.3).«

²² Höflmayer et al. 2016, 53.

²³ For the identification and nomenclature of the Cypriot wares see Åström 1972a and Åström 1972b.

²⁴ For the synchronization of Tell el-Dab^ca with Ashkelon cf. Bietak et al. 2008, 49–60.

²⁵ According to the chart, the beginning of Phase G1–3 corresponds to approximately 1750 B.C. Cf. also the proposed higher date by D. Aston, this volume.



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Fig. 1 Chart, SCIEM 2000, compared sites in the Eastern Levant with highlighted Cyproit wares (© OeAW-OREA/I. Hein)

rary time span of dissemination and emergence of the wares in the Levantine regions which has been assigned to around 1750 + 15/20 B.C. based on the stratigraphic record.

In the following paragraphs, I would like to comment on some aspects of Cypriot wares from the Bronze Age, their significance and some of the problems, weak points or considerations relating to the interpretation of the materials.

Second thoughts on the Middle Cypriot material from Tell el-Dab^a/^cEzbet Helmi and Maguire's evaluation

Working at the site of Tell el-Dab^a/^cEzbet Helmi, we are in the lucky situation to have an enormous quantity of finds and objects at hand for further interpretation. The Cypriot material has been subject of several studies, and a general overview about the appearance of Middle Cypriot pottery in Tell el-Dab^a and the implications in the wider eastern Levantine region have been investigated by Louise Maguire in the monograph »Tell el-Dab^a XXI. The Cypriot pottery and its circulation in the Levant« which has been published in 2009.

Her study was based on a catalogue of Cypriot pottery from the excavation areas A/I, A/II, A/IV and A/V, and also included area F/I. These areas are mainly settlement areas, with some cemetery zones, including smaller ritual structures in area A, in addition to a smaller palacelike structure in area F/I.

For a general overview of the entire site, however, the evaluation of finds from these areas is still incomplete and difficult to use, since for example the area of ^cEzbet Helmi (H/I–H/VI) is not included in Maguire's study as well as the more recent excavations at ^cEzbet Rushdi²⁶ which have revealed that Middle Cypriot material is also missing. Maguire's investigation is nevertheless important, as it proposes a general hypothesis about the appearance of Middle Cypriot ware in the Eastern Levant, including the Nile Delta. Nevertheless, the discussion of some Late Cypriot wares in her study (see the reproduction of the data used by Maguire in fig. 2) can now be considered irrelevant due to the more recent finds in ^cEzbet Helmi, and should not be used for further interpretations. Maguire herself states correctly »excluding ^cEzbet Helmi«²⁷.

When analyzing this chart by Maguire, for which she states in the text having used 240 pieces for her table 3 (»The occurrence of Cypriot pottery at Tell el-Dab^a by stratum level«)²⁸, it is evident that after counting the numbers provided in her table in the columns, which are separated by their respective appearance in the stratigraphic record, that there are only 201 stratified ceramic fragments from Cyprus having been found at Tell el-Dab^a. Looking at the sums of the given numbers in the columns, we have to correct the total of pieces for the respective wares as following: WPPLS 19, for WPCLS 18, Pendent Line Style (PLS)/Cross Line Style (CLS) 6, White Painted alternating Broad Band Wavy Lines (WPABBWL) 8, WPV 47, White Painted Various (WPVar) 46, RoB 3, Black Slip (BS) 0²⁹; in the final count the total of listed stratified items is therefore 201, and a possible explanation for the missing 39 pieces might be that they are not from a stratified context and were therefore excluded in the table. In the catalogue part of Maguire's study from 2009 there are 390 entries from Tell el-Dab^a³⁰, this amount is the total of Cypriot sherds from the areas A/I, A/II, A/IV, A/V, and F/I, and includes the surface finds and stray finds, as well as Late Cypriot sherds from these areas. The Middle Cypriot material that had been known

²⁶ The ceramic corpus of area R/III is studied by V. Michel in a PhD project. For the earlier Middle Kingdom levels cf. Czerny 2015, 366–368, where stratified Cypriot pottery finds from the Middle Kingdom levels are not attested, only from later pits or surface finds.

²⁷ Maguire 2009, 39.

²⁸ Maguire 2009, 39 n. 43: »240 sherds have been able to be dated by their context and the remainder remain from disturbed levels.«

²⁹ The indication 0 refers to a possibly BS fragment in Maguire's Excel-chart. Maguire uses additionally »Style« for labelling the ceramic wares, therefore WPPLS is the abbreviation for White Pendent Line Style, which is the equivalent for WPPL, WPCLS for White Painted Cross Line Style, etc.

³⁰ Maguire 2009, 93–173.

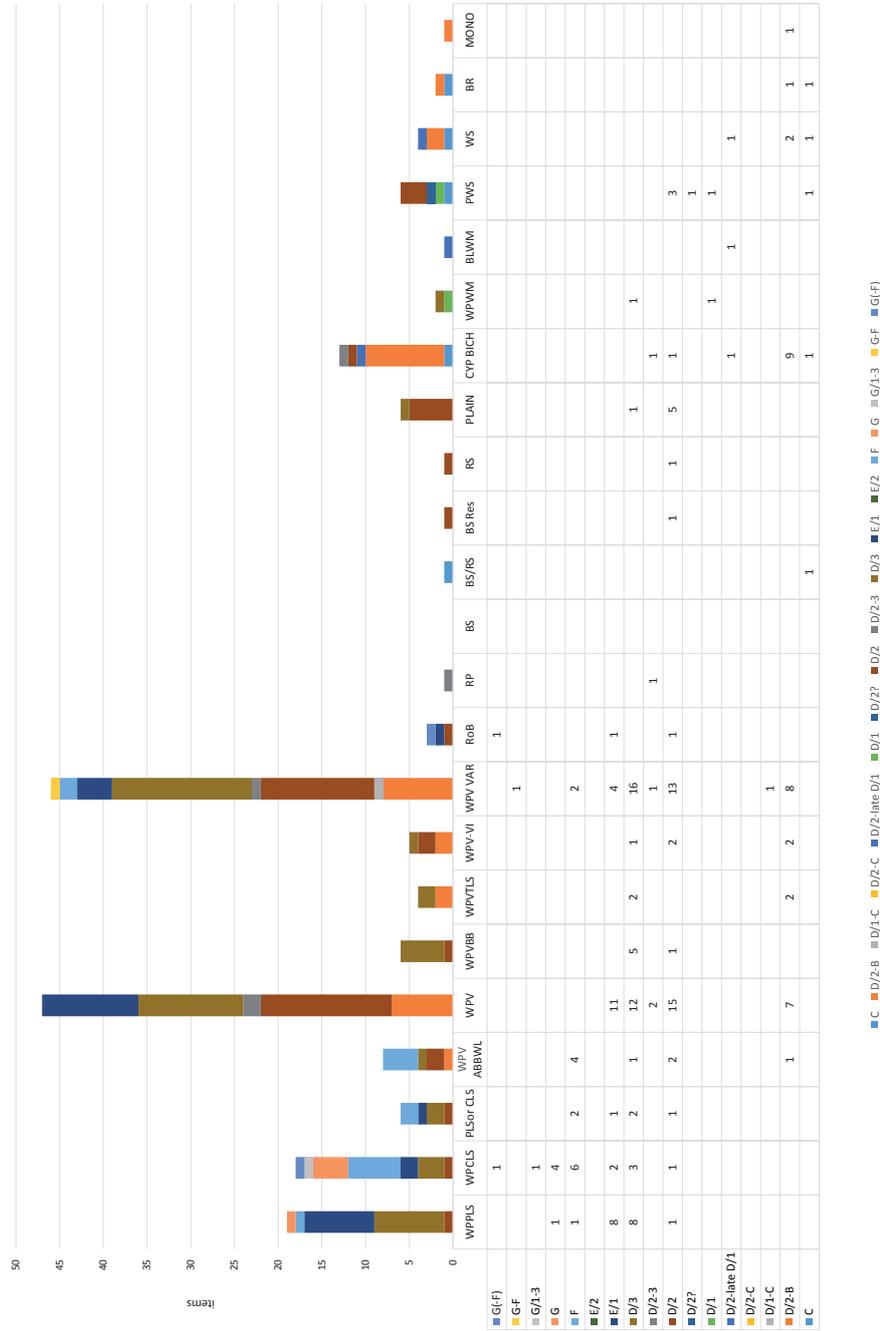


Fig. 2 The appearance of Cypriot wares according to Maguire (2009) from the areas A/I, A/II, A/IV, A/V and F/I (© I. Hein)

at that time were 340 fragments, whereas the unstratified material (139 fragments) is approximately 40 %. From the total of 390 the remaining 50 fragments belong to the Late Cypriot wares.

A further thought has to be directed towards the chronological appearance of some Middle Cypriot wares. Maguire writes on p. 39 that WPPLS and WPCLS appear in levels possibly as early as stratum F, continuing into stratum D/2. In her table 3 entries for both wares are given for earlier strata, the stratum G or G–F³¹. A further inconsistency between text and table 3 can be found in the dating of LC wares, see for example her statement on p. 39: »PWS, WS, BR and MOC do not appear before D/3«, whereas in table 3 the entries are given later with D/2 as earliest for PWS, D/2–D/1 for WS, and BR and MOC in the vague range of D/2–B³².

In the SCIEM chart (fig. 1) the appearance of WPCL is noted for the 13th Dynasty, which corresponds to stratum G/1–3 at Tell el-Dab^a and for the WPPL to stratum F, which still dates to 13th Dynasty³³.

Apart from the points mentioned above, the entries in the comparative SCIEM chart (see fig. 1) for WPCLS are assigned to stratum G1–3 and for WPPL to stratum F, based on Karin Kopetzky³⁴ for Tell el-Dab^a. In concordance with other sites as shown on figure 1, it is possible to see a horizontal datum line between Tell el-Dab^a and Tell el-^cAjjul for the WPCL, and an even better concordance exists for WPPL among the sites of Tell el-Dab^a, Tell el-^cAjjul and Tell Arqa in Lebanon.

Similarly to the first appearance of these Cypriot wares, which can be attributed to the 13th Dynasty, it is possible to note the apparently later simultaneous occurrences of WPV in Tell el-Dab^a, stratum E/1, Tell el-^cAjjul phase 11, and Lachish phase 6, that corresponds to the Hyksos Period³⁵.

It is, however, necessary to take into consideration that the results of the recent excavations at Tell el-Dab^a in areas F/II and ^cEzbet Rushdi (R/III and R/IV) have not yet been extensively evaluated, and so the occurrence of Cypriot wares in the 13th Dynasty and Second Intermediate Period layers might still shift.

Second thoughts on the Late Cypriot material from Tell el-Dab^a/^cEzbet Helmi: recent data and interpretation

Without question, the areas of ^cEzbet Helmi are important for the later phases of the Hyksos Period (str. D/3–D/2) and the so-called transitional phase D/1, as well as for the New Kingdom strata (C/3–B), because the corresponding archaeological layers are well-preserved here (see fig. 3, stratigraphy chart Tell el-Dab^a/^cEzbet Helmi).

The context of the finds from ^cEzbet Helmi is different from the other areas on the tell (A), since we are dealing here with palatial areas, cutting into earlier settlements, and only a few burials have been found. The situation of the New Kingdom palaces has even lead us to the assumption of a different use of imported pottery wares, and we have to keep in mind the possibility of banquets, festivities and the arrival of goods as tribute or gifts as part of an international exchange on the court level³⁶.

³¹ For the strata cf. Bietak – Höflmayer 2007.

³² The discussion of the chronologies in chap. 5 of Maguire 2009, 77–87 is not conclusive for the chronological attribution of the Cypriot pottery as it relates to the range of the TD strata. This chapter is rather interesting with regard to the interpretation of the various sequences and for the *comparanda* at Cyprus.

³³ Kopetzky 2010, 265–268, attributes the earliest Cypriot fragments for WPCL from the settlement areas to stratum G/1–3, and she points out the confirmed occurrence for WPPL in stratum F. Whereas Forstner-Müller 2008, 82, observes in the burials in area A/II the occurrence of WPPL-ware from stratum E/1 onwards, but WPCL is here not explicitly named. Bader 2009 is not referring to Cypriot ceramics in her comparative study between Memphis and Avaris.

³⁴ Kopetzky 2010.

³⁵ For a new chronological setup of the 13th Dynasty cf. Höflmayer et al. 2016, and D. Aston, this volume.

³⁶ Cf. Hein – Stidsing 2013; Hulin 2009.

	B.C.	EGYPT RELATIVE CHRONOLOGY	TELL EL - DAB ^a					GENERAL PHASES
			TOWN CENTRE (Middle Kingdom) 'Ez. Rushdy	NEW CENTRE MB-Population	EASTERN TOWN	NORTHEASTERN TOWN	PALACE DISTRICT 'Ez. HELMI	
			R / I	F / I	A / I-IV	A / V	H / I-VI	
	1410	Dyn.						
LB I	1440	AlI						
	1470	XVIII H TIII					Thera Pumice c	C / 2
	1500	TII ITI					Paintings d	C / 3
	1530	Al						
MB III	1560	AHMOSE					e / 1.1-2	D / 1.1-2
	1590	XV HYKSOS						
	1620		DENUDED					
MB II	1650							
	1680							
MB I-II	1710							
	1740	XIII						
	1770							
MB I	1800							
	1830							
	1860							
	1890	XII						
	1920							
EB IV	1950							
	1980							
	2000	XI						
	2050	X						

© by M. Bietak (2002)

Fig. 3 Stratigraphy Tell el-Dab^a/^aEzbet Helmi – Chart (© OeAW-OREA)

The charts that show the occurrence of the Cypriot ceramics from areas A/V, H/I+H/IV, and H/V (see fig. 4) were already presented at a conference in 2003, and published in 2009³⁷. In addition, a compiled chart of these areas was also presented at a workshop for Lustrous wares in Vienna in 2004, published 2007³⁸, including the assignments of the levels to the construction phases within the stratigraphy. Areas H/III and H/VI were not yet evaluated at this time, however in the meantime more material has been published by Perla Fuscaldo and Bettina Bader, as well as the ceramics from area H/VI is currently studied by David Aston³⁹. The new chart figure 4 integrates the Cypriot finds from all excavation areas at ^aEzbet Helmi, from H/I–H/VI, as far as information has been accessible.

A comparison of the chart from 2007 with the new version here shows of course the increase in the amount of potsherds. The date of the appearance of the Late Cypriote wares has basically

³⁷ Hein 2009, figs. 4.3; 4.5 and 4.7.

³⁸ Hein 2007, 96 fig. 10. Lustrous ware conference in Vienna 2004, published 2007.

³⁹ Fuscaldo 2003, and Fuscaldo 2009; Bader 2006. D. Aston, recently dealing with area H/VI, kindly agreed to integrate the data from area H/VI in the chart, see Aston 2007, 213, where he provides a table of Cypriot pottery wares from area H/VI. See also his contribution in this volume.

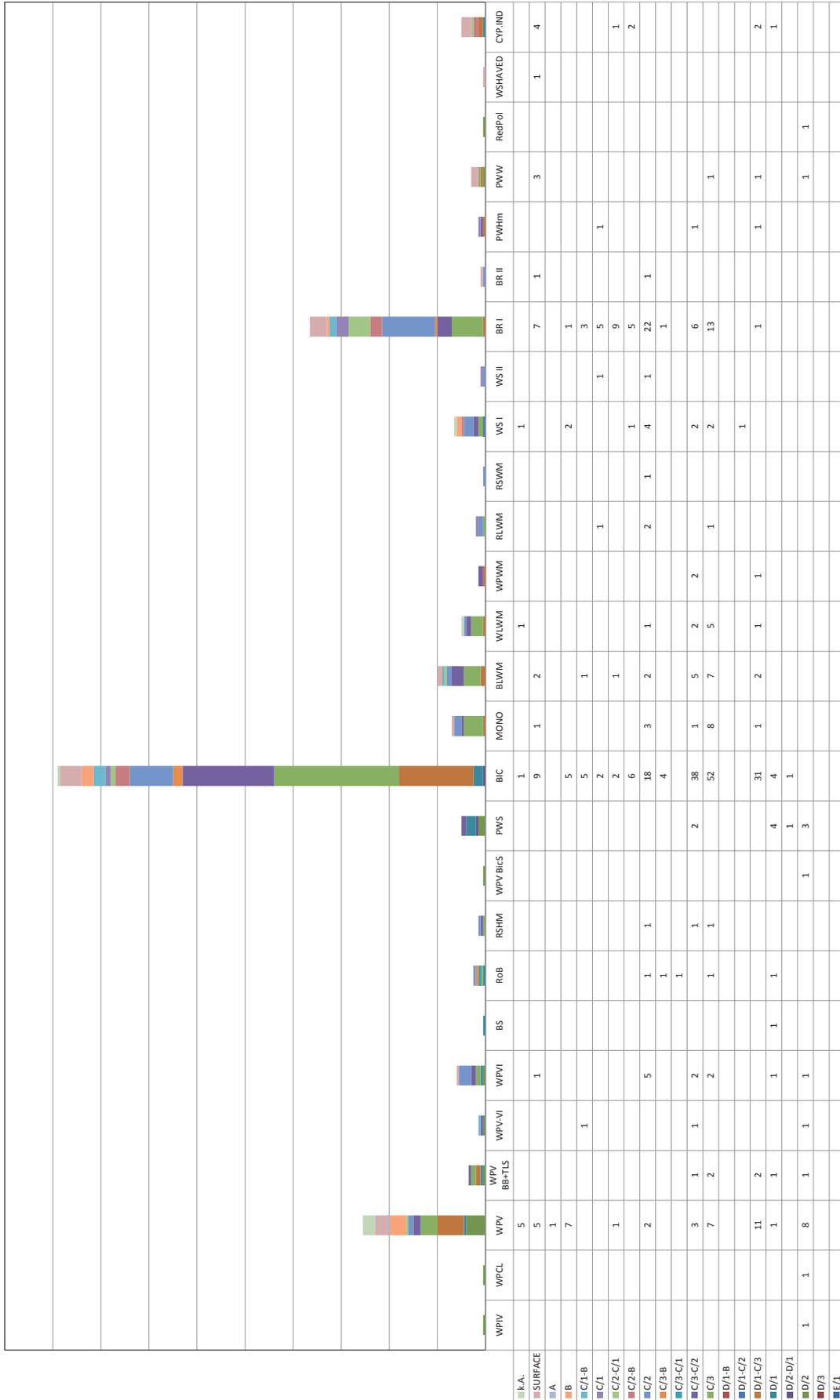


Fig. 4 The occurrence of Cypriot ceramics from 'Ezbet Helmi, areas H/1+IV, H/II, H/III, H/V and H/VI (2016) (© I. Hein)

not changed in relation to the marked increase in the quantity of the material, as the sequence of the levels from H/I+IV, H/V and in H/VI corresponds well in this area.

Highlighting Bichrome Wheel-made ware (BICWmW)

One of the most sensitive wares with regard to the end of the Hyksos Period and the early New Kingdom is the Bichrome Wheel-made ware (BICWmW)⁴⁰. This particular ware is considered as a prominent marker for the beginning of the Late Cypriot IA phase on the island⁴¹ and together with the Base Ring ware, it was the focus of a conference in 2000 in Stockholm. Because of the neat decoration in Red and Black paint, Bichrome Wheel-made ware is easily recognizable in the often rather uniform appearance of the pottery contexts. The ware is widely distributed in the Eastern Mediterranean⁴², from the modern southern Turkish coast in the Hatay area, down to the Levantine coast along Syria, Lebanon and the Canaanite coast, up to Egypt in the south. A few finds were also brought down to Nubia (fig. 5). From the appearance of the ware mainly in Late Bronze I layers in the Eastern Levant⁴³, and by the comparison of contexts at various sites, it has been possible to observe chronological correlations.

Within the Bichrome Wheel-made ware project, which includes about 2,500 items stored at various museums, originating from various sites and archives that have been registered in a database, creating the much needed basis for further typological studies and analyses of decorative motives, as well as for compiling the analytical data of the wares⁴⁴.

The chronological framework of the BICWmW within the Second Intermediate Period/early New Kingdom transition is still a matter of debate. The claim, that Bichrome Hand-made ware (BICHmW) appears first in stratum D/2–3, as it was listed based on the area A contexts in Maguire's study from 2009, is not clearly verifiable. Only two pieces of BICWmW can be traced in A/V for stratum D/2⁴⁵, whereas most of the bichrome painted sherds from the A-areas come from disturbed contexts or surface layers⁴⁶.

In the areas at ^cEzbet Helmi we find a different situation. First of all we are dealing here with habitation zones, not disturbed by larger burials, but more difficult in the distinct attribution of finds to a specific level. Manfred Bietak reported in 2001 about Bichrome Hand-made ware⁴⁷ (»BICHmW occurs already in levels from Str. D/2 onwards«). A close look at these fragments showed that they have a strong similarity with the WP fabrics that are made from a sandy clay source, and the fabric of these fragments does not fit macroscopically to the range of the Bichrome wares. Therefore this classification has to be changed. As a result, we have to attribute these fragments to the WPV Bichrome-style-group. This implies, that wares with bichrome painting, such

⁴⁰ For that reason this ware was chosen as a specific focus for chronological studies by the Cyprus project of SCIEM 2000, the author was principal investigator of the Cyprus project, as well as project leader of the Bichrome project.

⁴¹ Cf. Åström 2001.

⁴² Hein – Stidsing 2013.

⁴³ Vilain 2015, 193–214.

⁴⁴ Bichrome Wheel-made ware material was investigated in many museums, such as the Cyprus Museum in Nicosia, the Louvre, Paris, the Medelhavsmuset Stockholm, the University College London, in the Rockefeller Museum, Jerusalem, and many others. The database contains archaeological data about the archaeological contexts, as well as descriptive entries about of vessel types, decoration and motifs, as well as analytical data of the objects.

⁴⁵ See Hein – Jánosi 2004, 120 fig. 92, 1; 164 inv. 6137 L, a very small fragment of a juglet, coming from a silo, stratum D/2. The fragment is quoted in Maguire 2009, 164 cat. 350. The second one, inv. 6489N, comes from a disturbed pit.

⁴⁶ Maguire 2009, 163–169, lists 21 Cypriot BICWmW. From this total we have to identify one sherd from A/II as WP V Bichrome Style (TD inv. 1186 = Maguire 2009, 167 cat. 358). The contexts from A/I are disturbed; from A/II there are 9 fragments from unclear contexts. From the A/V examples we have 10 that come from »D/2 or later« contexts.

⁴⁷ Bietak 2001, 175–202.

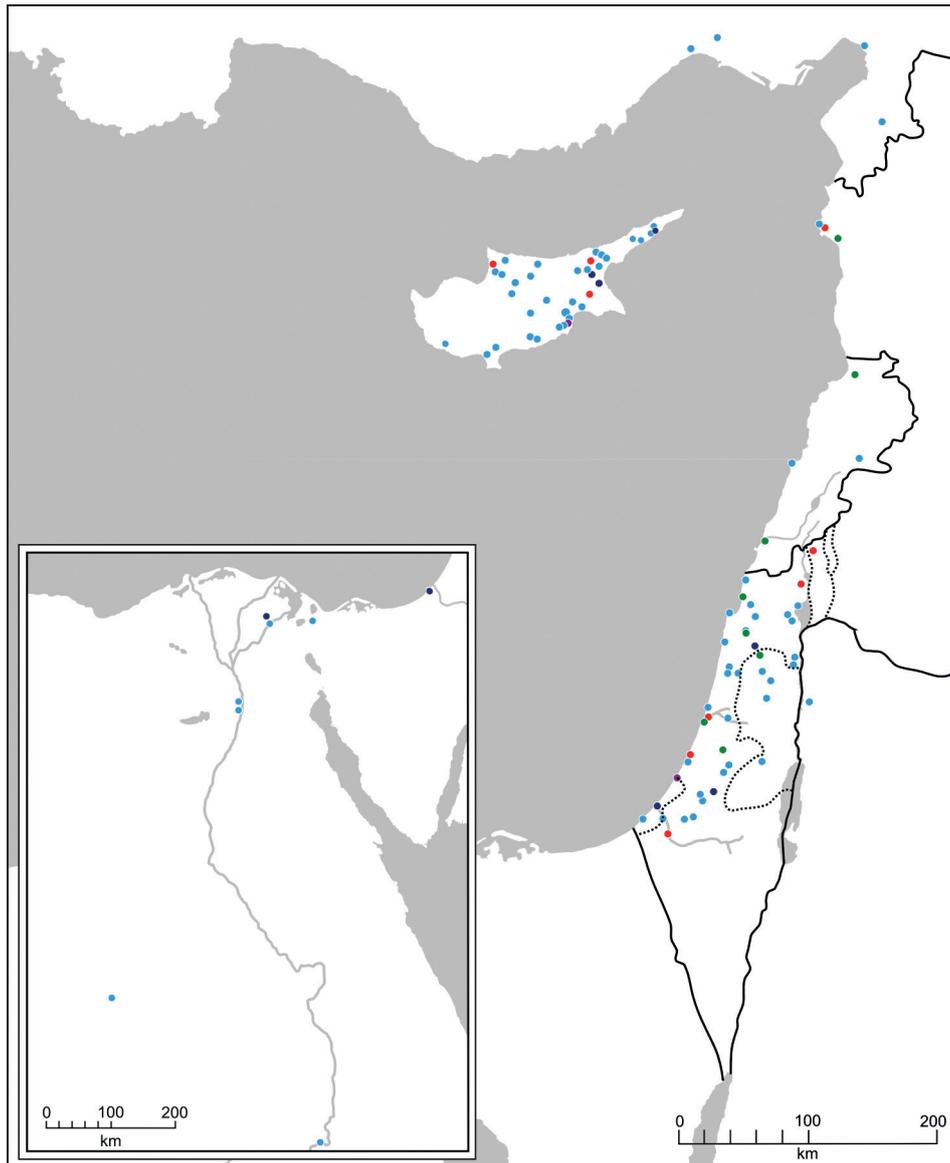


Fig. 5 Spatial distribution of Bichrome Wheel-made ware in the Eastern Mediterranean (© I. Hein)

as WPV-Bichrome Style, occur in stratum D/2, as well as possibly two BICWmW fragments⁴⁸ from area A/V in stratum D/2.

In contrast to the little evidence for the first appearance of BICWmW in the A-areas, we find more abundant evidence at ^cEzbet Helmi such as the well-represented quantity of 29 fragments from areas H/I+IV and 34 from H/V. The earliest occurrence can be seen here in stratum D/1–C/3 in strong evidence from area H/V (25 fragments) and it is clearly found afterwards in stratum C/3 and later (see fig. 4). In area H/V, where we have a detailed stratification for the various archaeological levels below the preserved magazine levels, the BICWmW has been found in a thin ashly layer (level 3) below the construction levels of the magazines, together with a few very small fragments of wall plaster belonging to the Minoan group of plaster fragments. Furthermore, BICWmW is found in several spots in area H/II, H/III and H/VI, in addition to the area and the surroundings of the so-called palace G⁴⁹.

⁴⁸ Hein 2009, 32 fig. 4, 3.

⁴⁹ See the map of ^cEzbet Helmi and the palaces in Bietak et al. 2007; cf. Bietak 2001. Also Hein 2001a.

The evidence for BICWmW ware in general can most probably be linked to the palatial activities of rituals and festivities⁵⁰, based on the appearance of the shape of kraters, which are well preserved from area H/II⁵¹.

It would be beyond the framework of this paper to include here all details and observations of BICWmW, but some remarks can be provided for the correlation of the bichrome finds from Tell el-Dab^a/Ezbet Helmi with the other sites in the SCIEM chart (fig. 1). We have to mark here a more or less synchronous occurrence between Tell el-Dab^a (secure for str. D/1.1) and Ashkelon/Ajjul (phase 10; str. H) as well as with Alalakh, whereas an earlier evidence is marked for Lachish, a discrepancy that indicates a rather long timespan for the first appearance of this ware. Therefore, this constellation needs reconsideration.

For Tell el-Dab^a/Ezbet Helmi we can now firmly attribute the appearance of BICWmW to stratum C/3, stratum D/1, and only as a rare occurrence already in stratum D/2.

Second thoughts on the Lustrous wares

The Lustrous wares is another widely distributed group of pottery that includes the subgroups BLWmW⁵², mostly represented by the shape of small globular or drop shaped juglets and the Red Lustrous Wheel-made ware (RLWmW)⁵³, which is mainly attested in the shape of tall spindle bottles as well as a small amount of White Lustrous Wheel-made ware⁵⁴ (WLWmW).

The question of origin of these wares has been the subject of several investigations in the last two decades, and some changes at the present stage of the investigation should be mentioned. For instance the debate of origin for the BLWmW shows a wide range of proposals, from the first interpretation as a Canaanite ware by William M. F. Petrie 1898⁵⁵, Einar Gjerstad in 1926⁵⁶, followed by Ruth Amiran and Eliezer D. Oren in 1969⁵⁷, or the wheelmade distinction by Erik Sjöqvist⁵⁸. The Cypriot origin was assumed by Gordon Loud and finally confirmed in Paul Åström 1972 and 2007⁵⁹, who points out its concentration in the eastern, central and north western part of Cyprus⁶⁰. The recent analysis of Eli Yannai and Amir Gorzalczany, published in 2007, and 2008, has confirmed the Cypriot origin for the so-called grey variant of the BLWmW, not excluding the possibility of other local imitations/productions in the Eastern Mediterranean. The mostly globular, or flat-based globular juglets were used as containers, probably created for a specific purpose, for example they are frequently included in tomb contexts. These features resemble the use and function of the Tell el-Yahudieh ware, that has been regarded as a predecessor of BLWmW. Eli Yannai has however revised this suggestion in 2008, where he now proposes that the earliest globular juglets follow the tradition of the Cypriot WP globular juglets⁶¹.

A changing interpretation has to be seen in the origin debate of the RLWmW. Whereas in 1993 Kathryn Eriksson proposed a Cypriot origin for the ware⁶², based merely on the frequent occur-

⁵⁰ Hein – Stidsing 2013.

⁵¹ The extensive interpretation and analysis of the BICWmW finds from Tell el-Dab^a and Ezbet Helmi is prepared for print in the forthcoming volume: I. Hein (ed.), *Craftsmanship in Red and Black: The Bichrome Wheel-made ware*.

⁵² Hörburger 2006 and 2007, 107–114; Yannai – Gorzalczany 2007, 197–205.

⁵³ Eriksson 1993.

⁵⁴ Eriksson 2007c, 61–70; Hein 2007.

⁵⁵ Petrie 1898, 36, remarked »being like Cypriote, but clearly not made in Cyprus«.

⁵⁶ Gjerstad 1926, 201–203.

⁵⁷ Amiran 1969, 146; Oren 1969, 127–150.

⁵⁸ Sjöqvist 1940, 103.

⁵⁹ See Loud 1948; Åström 1972b, 217; Åström 2007, 20–21.

⁶⁰ Hörburger 2006. BLWmW is distributed in Egypt from the Delta area, f. i. down to Nubia, into the cemetery at Aniba, see Hörburger 2007, 107–113. Cf. Steindorff 1937.

⁶¹ Yannai 2008.

⁶² Maguire 2009, 64, thought about North Syrian coastal ancestors for the spindle bottle types and the surface treatment.

rence on the island, the spatial distribution has changed due to the more recent finds of RLWmW in Anatolia, such as the numerous finds from Bogazköy⁶³.

The results based on the clay analysis by Carl Knappett and Vassilis Kilikoglou in 2007 showed convincingly⁶⁴ that the Kyrenian region in Cyprus is probably one center of production, but also the southern Anatolian region near Ovacik seems a possible place of production⁶⁵. Therefore, the Cilician region can be regarded as a highly probable candidate for the production of this ware in general, as well as the ware which was produced in the Syro-Lebanese area. Recent analytical results by Ekin Kozal based on the Anatolian finds from Kinet Höyük and Kilise Tepe, including the mapping of the distribution in Asia Minor show clearly the distribution stretching from the coastal area in southwestern Turkey to the Anatolian plateau. The Anatolian finds clearly soften the argument of Eriksson who emphasized the largest shape variety being in Cyprus, and Kozal discussed convincingly the types and refers to an Old Hittite origin of the shapes and the various production places of the ware⁶⁶.

We therefore conclude, that the interpretation of the RLWmW has to shift considerably towards an Anatolian/North Syrian shape and the existence of a production place in the North Syrian/Anatolian coastal area is a likely solution. This interpretation does not exclude the possibility of other local imitations of this ware, or a production place in Cyprus. It is however widening the previous interpretation of a cohesive regional cultural development towards a more open Eastern Mediterranean community in the Late Bronze Age that exchanged and took over foreign goods, but also imitated imported vessels.

The stratigraphic occurrence of BLWmW at 'Ezbet Helmi is coinciding with the appearance of White Lustrous Wheel-made ware (WLWmW) and Monochrome ware (MOC)⁶⁷ already present in level 4 at 'Ezbet Helmi, area H/I that has been considered as the construction phase for palace F. It is the earliest level above the older garden levels (attributed to the Hyksos Period, str. D/2) and the ware is also found in level 3 in area H/I+IV. It occurs in the *extra mural* layers of H/I, on the exterior of the large enclosure wall (dated to the Hyksos Period, str. D/2) in relative stratum e.1, corresponding to stratum D/1. From the perspective of local pottery this level has no Egyptian Black Rim ware, which is found in considerable quantities from stratum C/3 onwards, and which has to be regarded as an Upper Egyptian pottery marker for the earlier Thutmosid levels in 'Ezbet Helmi⁶⁸. The Black Rim ware is well attested by finds for instance from the treasury of Thutmosis I in Karnak⁶⁹, or from the Hatshepsut precinct in Deir el-Bahari⁷⁰. BLWmW also occurs in H/V level 1 corresponding to stratum C/3–C/2 which is assigned to the Thutmosid period⁷¹. The occurrence of BLWmW in 'Ezbet Helmi is shown in the chart of Bietak and Höflmayer, 2007⁷² for stratum D/1.1. This occurrence is based on the evaluation of the area »H/I – *extra mural*«, where BLWmW was found in level 4b, corresponding to stratum D/1, below the plaster pits,

⁶³ Mielke 2007.

⁶⁴ Knappett – Kilikoglou 2007, 115–140; Knappett et al. 2005, 25–59.

⁶⁵ Cf. also the analyses of Schubert – Kozal 2007, 169–175, who reached the conclusion that the origin of BLWmW and RLWmW is a single source based on their analysis of samples from Bogazköy and from Cyprus, and their NAA data. In contrast Manuelli 2009, 251–267 suggests multiple production places and a variety of fabrics.

⁶⁶ Kozal 2015, 53–63 fig. 1.

⁶⁷ See Hein 2007, 96–97 fig. 10. Aston 2007, 213, lists BLWmW and WLWmW only for stratum C.

⁶⁸ See a brief discussion in Hein 2001b, 139: »... daß die Schwarzrandware vorerst als indikatives Datierungskriterium für die früheste Phase C angesehen wurde.« The Black Rim pottery is attested for the early 18th Dynasty, according to Bourriau, 1997, already in late 17th Dynasty, but certainly diffused until the time of Thutmosis III. In general it is a marker for the Thutmosid period, whereas the first appearance is debatable. It has certainly a peak appearance under Thutmosis I and Hatshepsut; cf. also D. Aston, this volume.

⁶⁹ Cf. Jacquet-Gordon 2012, fig. 54.

⁷⁰ Observation by the author, I want to thank Z. Szafranski for the opportunity to see the material in 2000. See also Szafranski 1992, 54 n. 5.

⁷¹ Hein 2009, 35 fig. 4, 5 and 37 fig. 4, 7. The item from H/V is remarkable, since we are dealing here with a large size BLWmW jug; see Hein 2009, fig. 4, 6 inv.8501 L.

⁷² Bietak et al. 2007, 18 fig. 4.

which were used for the preparation of the Minoan paintings in palace F⁷³ (attributed to str. C/3⁷⁴). Therefore the BLWmW is earlier than the plaster pits.

In the comparative chart (fig. 1) any further occurrence for BLWmW – outside of Tell el-Dab^a – is marked only for Alalakh with a coinciding date, and interestingly enough, it was not marked for Tell el-^cAjjul and Ashkelon or for Lachish, where the ware is nevertheless represented⁷⁵.

Proto Grey Lustrous-ware (as a predecessor) was proposed for some representatives from tomb complexes in Lachish from the MBIIB, but the BLWmW is also found there in a LB tomb⁷⁶. Jürgen Hörburger discusses the occurrence of BLWmW in the Levant, and we find it present in the MB III (= MBIIC) phase, in general slightly earlier than the Base Ring I ware, an observation that confirms Eliezer D. Oren's hypothesis⁷⁷. This is also the case at ^cEzbet Helmi, in particular we can prove the presence of this sequence in the levels in area H/I-*extra mural*.

In the chart figure 4 we have noted the evidence for RLWmW from Tell el-Dab^a and ^cEzbet Helmi in stratum C/3, where Kathryn Eriksson⁷⁸ confirms the peak of appearance for this ware. The RLWmW occurrence is synchronous with Tell el-Ajjul and Ashkelon, Tell Arqa and Alalakh, whereas for Lachish a slightly later appearance has been noted.

Eriksson in 2007⁷⁹ was also reevaluating the chronological appearance for the RLWmW in Egypt, she convincingly concluded that there is no appearance of RLWmW in the SIP, as it was claimed in 1968 by Robert Merrillees⁸⁰, she marks the first appearance of the ware for the time of Amenhotep I, based on the evaluation of burial complexes from Aniba already in 1993 and corrects this view in 2007 towards⁸¹ the following: »The evidence reinforces my current view that RLW-m began towards the end of the LC IA:2 and probably after the reign of Amenhotep I. Whilst I still believe that the ware may first appear in Egypt before the reign of Tuthmosis III, it is unlikely to have been much earlier than the start of his reign.«

For Tell el-Dab^a/^cEzbet Helmi I have already discussed in 2007 the contexts for the appearance of RLWmW, in which the link to the reign of Amenhotep I could not be confirmed⁸² and since then, no new interpretation for the occurrence and chronology of Lustrous wares can be made in relation to the material from sites in Egypt or more specifically at Tell el-Dab^a/^cEzbet Helmi according to my knowledge. Therefore I am reproducing at the end of my contribution again the two paragraphs from 2007, as they are important for the relative chronological setting of the levels from ^cEzbet Helmi, including that the early appearance of RLWmW under Amenhotep I cannot be confirmed by the finds from ^cEzbet Helmi and should be regarded with caution⁸³. In my analysis of the Lustrous ware finds that was finally printed in 2007, I have pointed explicitly to the important fact of the occurrence of Egyptian Black Rim pottery for stratum C/3 (str. rel. d and c) at ^cEzbet Helmi. The statement that this ware is marking the New Kingdom in the area was already

⁷³ The BLWmW contexts are discussed in Hein 2007, 91 fig. 7 b.

⁷⁴ Cf. Bietak et al. 2007, 14–26.

⁷⁵ Cf. Oren 1969; cf. Yannai – Gorzalczany 2007, 199. Yannai and Gorzalczany are proposing a Proto Grey Lustrous ware, found already in MBIIB contexts from Beth Shean, Lachish and Kabri.

⁷⁶ For Lachish, Tomb 1555, cf. Tufnell 1958, pl. 77, 773–774.

⁷⁷ Hörburger 2006, 87–88; Oren 1969, 134–135. Cf. also the more recently in Tell el-Ajjul, see Fischer – Sadeq 2002, 138–139 tab. 1.

⁷⁸ Eriksson 2007a; Eriksson 2007b; Eriksson 2007c.

⁷⁹ Eriksson 2007a; Eriksson 2007b; Eriksson 2007c.

⁸⁰ Merrillees 1968, 171. He remarks: »Its significance stems from the fact that Syria was probably the major, if not the only producer of the R.L. ware.«

⁸¹ Eriksson 1993, 96–97; Eriksson 2007a; Eriksson 2007b; Eriksson 2007c. The evidence comes in particular from one tomb at Aniba, where a fragment of a spindle bottle and a scarab of Amenhotep I was found. This evidence has however to be regarded with caution, and one has to await the new evaluation of the tombs at Aniba, Cemetery S, which is currently a project of the University Leipzig (J. Helmbold-Doyé, C. Näser and A. Seiler). Cf. Steindorff 1937, 135 pl. 85.

⁸² Hein 2007, 84.

⁸³ Hein 2007, 81–84.

presented in the first preliminary report about the ^εEzbet Helmi ceramics in 1994⁸⁴, and also later in the following conferences and statements. David Aston came to the same observation based on his studies of the pottery from area H/VI⁸⁵, and we can conclude that the Black Rimmed pottery should be accepted as the most significant ware for the chronological assessment of stratum C/3 (relative str. d and rel. str. c in ^εEzbet Helmi, more detailed level 4 and 3 in H/I, level 2 in H/V [area related str. rel. c])⁸⁶. »Neither the three finds from area H/I, nor the single piece from H/III, which is dated to str. rel. d–c, corresponding to phase C/3–C/2, can prove with certainty a date under Amenhotep I or Thutmosis I. The fact that we have the imitation of RLWm-ware (which represents the earliest find from H/I) together with some black rim pottery in the context, shows that we eagerly have to consider a Hatshepsut/Thutmosis III date for the settlement levels of H/I (levels 3 and 2), since the latter ware is attested still under Thutmosis III from contexts from Deir el-Bahari. Such finds show no difference in their manufacture from the ^εEzbet Helmi material, and must be seen as the same type of black rim-ware in Nile clay, even they might have been produced in different local regions, such as the Delta or as near Luxor. If phase C/3 (str. rel. d) starting already under the 21 regnal years of Amenhotep I cannot be proved, nor the beginning of phase C/2 (str. rel. c), then with some reliability, the reign of Thutmosis I (13 years), Thutmosis II (2 years) or the following early period of Thutmosis III/Hatshepsut must be taken into consideration for Str. C/3.« (Hein 2007, 84).

It is obvious that stratum C/3 is definitely marked by different ceramic types in comparison to the preceding transitional and the Hyksos Period, this can be observed also from the changing Cypriot material, where we have in the Hyksos Period the predominant WP wares, whereas in the New Kingdom a range of the Late Cypriot IA:2 wares is represented. The transitional period, stratum D.1, however, shows the income of LC IA:1 wares, such as BICWmW, possibly WLWmW, BLWmW and MOC, but the evidence of LC IA wares already in Hyksos levels until stratum D/2 remains very vague.

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⁸⁴ Hein 1994, 39–40.

⁸⁵ Aston 2007; cf. D. Aston, this volume.

⁸⁶ Cf. Hein 2001b, 122.

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Felix Höflmayer

An Early Date for Khyan and Its Implications for Eastern Mediterranean Chronologies

1 Introduction

Recent excavations at the site of Tell Edfu give reason to assume that the well-known Hyksos ruler Khyan might have to be placed considerably earlier within the sequence of kings of the 15th Dynasty than commonly thought and that there might have been an overlap between the 13th Dynasty ruling at Lisht and the 15th Dynasty ruling at Avaris¹. Such a shift is not only important for understanding the political history of the Second Intermediate Period and the Egyptian historical chronology, but also has considerable implications for absolute calendar dates for the site of Tell el-Dab^a, the Aegean Middle and Late Bronze Ages, and the ongoing discussion about the apparent discrepancy between calendar dates based on radiocarbon evidence and dates based on archaeological interpretation and the historical chronology of Egypt.

This paper summarizes the current state of debate on Khyan's place in the Second Intermediate Period and the archaeological evidence for Khyan throughout the Eastern Mediterranean, and revisits the chronological importance of a number of crucial finds such as the seal impressions mentioning his name at a palatial building at Tell el-Dab^a, a lid of a stone vessel with his name found at Knossos, and seal impressions found at Tell Edfu. It has been argued in the past that radiocarbon dates for both the site of Tell el-Dab^a as well as for the Aegean early Late Bronze Age are not reliable and too high compared to historical/archaeological estimates². This paper reviews chronological data for both Tell el-Dab^a and the Aegean early Late Bronze Age under the premise of a higher date of Khyan based on the evidence from Tell Edfu and challenges the conventional dates for the stratigraphy of Tell el-Dab^a and the Aegean chronology as proposed by the SCIEEM 2000 special research project under the direction of Manfred Bietak³.

The Second Intermediate Period, its internal political phasing and structure, the sequence of kings, and the extent of overlap between dynasties is still a much debated issue in Egyptology and reconstructing the relative order of the kings of the 13th and 15th Dynasties is hampered by many problems⁴. One of the most important sources for the political sequence is the much debated Turin King List, also known as the Turin Canon, a fragmentarily preserved papyrus, dateable to the times of Ramesses II, which records a list of kings from the archaic period down to the end of the Second Intermediate Period⁵. The rulers of the Second Intermediate Period are noted in Alan

¹ Moeller et al. 2011.

² Bietak 2013.

³ For publications of the SCIEEM 2000 project see the series »Contributions to the Chronology of the Eastern Mediterranean« and the general conference volumes: Bietak 2000; Bietak 2003b; Bietak 2007a. For a recent assessment of 2nd millennium chronology of the Eastern Mediterranean according to SCIEEM 2000 and Manfred Bietak, see: Bietak 2013.

⁴ See *inter alia*: Labib 1936; Stock 1942; von Beckerath 1964; Franke 1988; von Beckerath 1997, 136–139; Oren 1997; Ryholt 1997; Schneider 1998–2003, 57–75; Schneider 2006; Schneider 2008; Allen 2010; Ilin-Tomich 2014.

⁵ Gardiner 1959; von Beckerath 1997, 19–23; Ryholt 1997; Allen 2010.

H. Gardiner's columns VI to IX, corresponding to Kim Ryholt's columns 7 to 11. The 15th Dynasty is recorded with six entries in column 10, designating the kings as *ḥkꜣ-ḥꜣswt*, but only the last ruler of the Hyksos Period, Khamudi, is mentioned with his name (column 10, line 28) and, unfortunately, the entry for the duration of his reign is lost. However, from a note on the mathematical papyrus Rhind (the main text dated to the 33rd year of Apophis) we learn that Heliopolis and Sile were conquered by »the southern great one« (most probably Ahmose) in the 11th year of an unnamed king and it is thus usually assumed that this date refers to Khamudi⁶. The preceding entry in the Turin Canon (column 10, line 27), mentioning 40 or more regnal years, then most likely refers to the well-known Hyksos king Apophis, who is known to have reigned for at least 33 years from the above mentioned papyrus Rhind. Also the king's name for Turin Canon column 10, line 26, the predecessor of king Apophis from column 10, line 27, is lost, only the entry for 10 or more regnal years has been preserved. Nevertheless, Khyan is usually regarded as the predecessor of Apophis and belonging to column 10, line 26⁷.

Based on the Turin Canon and the note on the Rhind mathematical papyrus and assuming that Khyan was the predecessor of Apophis, Khyan was dated roughly around 50–60 years before the end of the Second Intermediate Period and the beginning of the 18th Dynasty. If an approximate 1550/1540 B.C. date for the beginning of the New Kingdom is assumed, absolute calendar dates for Khyan would fall around 1600 B.C. Jürgen von Beckerath dated Khyan to 1610/1607–1590/1587 B.C.⁸, Erik Hornung, Rolf Krauss, and David A. Warburton without mentioning exact dates, put Khyan before ca. 1575 B.C.⁹.

The traditional sequence Khyan – Apophis – Khamudi has been challenged on the basis of detailed studies of scarab typology by William Ward and recently by Daphna Ben-Tor¹⁰. According to their studies, the royal name scarabs can be divided into four distinct groups, where Khyan belongs to the first, while Apophis should be placed in the last group. Based on these typological sequences, Khyan should be regarded as one of the first Hyksos rulers, a suggestion that was found to be convincing for example by Detlef Franke: »An Wards typologischer Reihung ist jedoch kaum zu zweifeln, sie ist in sich völlig schlüssig.«¹¹ Other scholars, however, while principally accepting a consecutive ordering of the scarabs, placed Khyan late in the series and rejected the sequence as proposed by William Ward¹².

The position of Khyan within the 15th Dynasty is therefore not agreed upon in current scholarship and, indeed, from the data presented above, no conclusive decision seems to be possible. Unfortunately, also archaeological objects inscribed with his name cannot help resolving this issue as most of them come from unknown contexts, some have been bought from dealers and the few objects for which a specific site is known or at least could be suggested with a reasonable degree of safety, come from doubtful contexts.

In the older literature it has been assumed that the widespread distribution of monuments and artefacts mentioning the name of Khyan might indicate an ephemeral but extensive empire that covered Egypt and the Levant, including contacts with, or maybe even dominance of, parts of the Aegean, Anatolia and Mesopotamia: »Das Hyksosreich muß ein ephemeres Großreich gewesen sein, wie so viele ähnliche, z. B. die der Hunnen und Mongolen, und es ist sehr wohl möglich, daß es unter Chian zeitweilig bis nach Babylonien gereicht hat.«¹³.

⁶ Peet 1923, 129; Chace 1927, 119; Chace 1929, pl. 108; Helck 1976; Spalinger 1990, 335; el-Sabbahy 1993; von Beckerath 1994, 115; Schneider 2006, 195; Schneider 2008, 303.

⁷ Ryholt 1997, 118–125 and tab. 23; Hornung et al. 2006, 492; Allen 2010, 9 tab. 1.

⁸ von Beckerath 1997, 137.

⁹ Hornung et al. 2006, 492.

¹⁰ W. Ward in: Tufnell 1984, 162–172; Ben-Tor 2007, 104–109.

¹¹ Franke 1988, 261.

¹² Ryholt 1997, 40–50; Krauss 1998.

¹³ Meyer 1926, 319.

Kim Ryholt gives a valuable overview of the royal monuments and artefacts inscribed with Khyan's name¹⁴. In Egypt his name is most commonly found in the Nile delta. A scarab of Khyan has been found by the early excavations of Shehata Adam in later layers near the Middle Kingdom temple at 'Ezbet Rushdi in the vicinity of Tell el-Dab'a¹⁵ and a fragment of a stela mentioning the oldest king's son of Khyan was found by locals during digging operations for the Bahr Faqus near the same site in the late 1970s¹⁶. At Tell el-Yahudiya, William Flinders Petrie found a scarab of Khyan (said to come from the »camp« but no specific context is given)¹⁷ and another scarab from the collection of George Fraser is said to come from this site as well, but again no context is known¹⁸. Kim Ryholt lists a second scarab from the Fraser collection as coming from Tell el-Yahudiya, but the present author was unable to verify this based on the literature¹⁹. From the excavations of Naville at Bubastis a fragmentary Middle Kingdom statue usurped by Khyan is known²⁰. It has been only in recent years that a palatial building at Tell el-Dab'a has been uncovered by the Austrian Archaeological Institute, where for the first time numerous seal impressions of Khyan have been found in an archaeological context²¹.

In Upper Egypt attestations of Khyan are scarce. A scarab of Khyan reported as coming from Giza by Kim Ryholt was in fact bought by George Fraser in Luxor from the well-known antiquities dealer Mahomet Mohassib²². Fraser reports that this scarab was subsequently stolen from him and »found its way into the Museum at Guizeh«²³. The provenance of this piece remains therefore obscure, as of most other scarabs of Khyan that are known from various collections²⁴. Kim Ryholt also mentions a cylinder seal inscribed with Khyan coming from Saqqara (which cannot be verified based on the literature)²⁵. From tomb 47a7 at Abusir el-Melek another scarab of Khyan is known, this time only mentioning his throne name *swwsr:n-R*²⁶. Further, a semi-cylindrical block of granite inscribed with the cartouche of Khyan was found in Gebelein, some 40 km south of Thebes, but again no context is reported²⁷. While some scholars argued for an (ephemeral) Hyksos dominance in Upper Egypt *inter alia* based on this piece²⁸, Daniel Polz argued convincingly that there is no reason to assume any kind of Hyksos presence in Gebelein or the southern part of Upper Egypt²⁹. The recently discovered seal impressions from Tell Edfu add important new evidence to this picture³⁰.

Outside Egypt his name is attested on objects found in the southern Levant, Anatolia, the Aegean and possibly Mesopotamia. A scarab of Khyan was found at Gezer in an unsecure and most likely later context near the south gate on the top of the inner city wall³¹. Another scarab, now in

¹⁴ Ryholt 1997, 383–385.

¹⁵ Adam 1959, 221 pl. 10 b; Ryholt 1997, 383 cat. 2.

¹⁶ Bietak 1981; Ryholt 1997, 384 cat. 11.

¹⁷ Petrie 1906, 15 pl. 4 A no. B3; 9 no. 124; Ryholt 1997, 384 cat. 12.

¹⁸ Fraser 1899, pl. 1 no. 8; Ryholt 1997, 383 cat. 3.

¹⁹ Ryholt 1997, 384 cat. 12 Basel 142. The publication of Fraser himself (Fraser 1900, 23 cat. 177) does not give any provenance, nor does the publication of Hornung – Staehelin 1976, 219 cat. 142.

²⁰ Naville 1891, 23–24 pl. 12; Borchardt 1925, 7 cat. 389 sheet 62 no. 389; Ryholt 1997, 384 cat. 13.

²¹ Sartori 2009; Bietak et al. 2012/2013 and below.

²² Fraser 1899, pl. 1 no. 10; Ryholt 1997, 383 cat. 4.

²³ Fraser 1899, 149.

²⁴ Ryholt 1997, 383–385 cat. 5. 6. 17. 18.

²⁵ Ryholt 1997, 384 cat. 14. The reference given by Ryholt (Newberry 1975, 47 fig. 23) does not mention any provenance.

²⁶ Scharff 1969, 92 pl. 71 no. 499; Ryholt 1997, 384 cat. 15.

²⁷ Daressy 1894, 42; Ryholt 1997, 384 cat. 16; Polz 2006, 239–240.

²⁸ E.g. Meyer 1926, 318–319: »Seine [Khyan's] Macht hat sich jedenfalls über ganz Aegypten erstreckt: in Gebelên oberhalb von Theben steht sein Name auf einem Steinblock ...«. Recently: Ryholt 1997, 135.

²⁹ Polz 2006.

³⁰ Moeller et al. 2011 and see below.

³¹ Macalister 1912, I 253; II 316 cat. 85; III pl. 204 b no. 16; Keel 2013, 276–277 cat. 247.

a private collection in Germany is said to come from Tell Beit Mirsim³² and a seal impression was found in the vicinity of Tell es-Safi³³. A fragment of an obsidian vessel inscribed with Khyan's name was found by the German excavations at Boğazköy in the vicinity of the so-called Haus am Hang³⁴. Again, the archaeological context cannot be determined with any safety: »Leider ist die Fundlage der Obsidianscherbe nicht durch Schichten bestimmbar, woraus ein Hinweis auf die relative zeitliche Einordnung des Stückes zu entnehmen wäre.«³⁵ A black granite lion incised with the name of Khyan on its breast was bought by George Smith for the British Museum in Baghdad and was *inter alia* used to argue for an extended Hyksos empire under Khyan³⁶. However, again the original context is unknown and therefore this piece cannot be used for chronological and/or historical conclusions. The famous alabaster lid inscribed with the name of Khyan that was found at Knossos and played a prominent part in the discussion on Aegean chronology, will be reviewed below³⁷.

Epigraphic evidence for Khyan is thus rather limited and the data at our disposal does not allow a reconstruction of the sequence of kings of the 15th Dynasty with a reasonable amount of certainty. Therefore, also absolute calendar dates proposed for the kings of the 15th Dynasty have to be treated with extreme caution. However, new seal impressions unearthed at Tell el-Dab^ca and Tell Edfu shed new light on the chronology of the 15th Dynasty and have considerable implications for chronologies of the Near East and Eastern Mediterranean in the mid-2nd millennium B.C.

2 Tell el-Dab^ca: The so-called palace of Khyan

Since 2006 a palatial compound of possible Near Eastern architectural style is being excavated in area F/II at the site of Tell el-Dab^ca³⁸. In most cases only the wall foundations could be traced since the original floor levels were lost due to agricultural activity in the area. So far, magazine blocks, parts of an enclosure wall, an entrance gate, a tower, and courtyards have been unearthed. According to the excavators, this palace belongs to the local (area F/II) stratum c/2 (early phase of the palace) and c/1 (later phase of the palace where the seal impressions of Khyan have been found)³⁹.

The seal impressions of Khyan have been found in a large pit complex (L81) that has been excavated in one of the courtyards (courtyard B). This pit was filled with a huge amount of broken pottery, animal bones and small finds like beads, shell pendants, or scarab seals. More than 1,800 complete vessel profiles could be restored⁴⁰. While Manfred Bietak synchronized stratum c/1 (the later phase of the palace to which L81 belongs) with stratum D/3⁴¹, David Aston argued for a slightly earlier date. According to him the ceramic material »can be dated to a very short period of time, equivalent to the transition from Phases E/1–D/3 in the general Tell el-Dab^ca chronology«⁴². A younger date was mentioned by Karin Kopetzky (»späte Hyksoszeit«) but rejected by David Aston⁴³.

While Bietak emphasized that L81 should be seen as an offering pit that was connected with courtyard B, which »seems to have been a place where ritual meals used to be celebrated« and

³² Görg 1998.

³³ Giveon 1965; Ryholt 1997, 384 cat. 10.

³⁴ Stock 1963.

³⁵ Stock 1963, 73 n. 1.

³⁶ Quirke 1994; Spencer 2004; Verbovsek 2006, 17–18.

³⁷ See Höflmayer 2012a, 172–175; Manning 2014, 35–37 and below.

³⁸ Bietak – Forstner-Müller 2006; Bietak 2007b; Bietak et al. 2007a; Bietak – Forstner-Müller 2009; Bietak 2010a; Bietak 2010b; Bietak et al. 2012/2013.

³⁹ Bietak et al. 2012/2013, 19 fig. 2.

⁴⁰ Bietak – Forstner-Müller 2007; Aston – Bader 2009; Aston 2012; Aston 2013.

⁴¹ Bietak 2013, 79 fig. 8, 1.

⁴² Aston 2012, 160.

⁴³ Kopetzky 2010, I, 125 n. 742; Aston 2012, 160–162.

where »intentionally broken pottery and animal bones were interred in a series of big pits«⁴⁴, David Aston on the other hand argued convincingly that the pit complex L81 should rather be seen as »the result of an ancient landfill project in which large amounts of rubbish, undoubtedly including, but not only, the refuse from several ritual meals, was gathered up and tipped into the pit complex with the sole purpose of raising the surface back to the original height of the courtyard«⁴⁵. The sealings thus come from secondary or tertiary contexts and one should be very cautious to associate them with the palace as such⁴⁶. The issue about the chronological relation of the pit material and the palace notwithstanding, it seems nevertheless clear that the ceramic material, dateable probably to the transition from stratum E/1 to D/3, can be associated with the seal impressions of Khyan. The ceramic material was described as being highly homogeneous and there is no reason to assume that the seal impressions should not be contemporary with the rest of the filling material.

According to Bietak eight seal impressions of Khyan have been found in the pit complex (L81), four of which were published in a preliminary report by Nicolas Sartori⁴⁷. A fifth seal impression of Khyan was found in L803, also dated to stratum c⁴⁸. The archaeological phases in which the seal impressions of Khyan were found, yielded also seal impressions of rulers of the 13th Dynasty, such as the fragmentary seal impressions of Sobekhotep III and Neferhotep that were found in L637, dated to stratum c or younger⁴⁹.

Additional seal impressions of Khyan, although from secondary deposits, were also found in stratum b and c of area R/III, a domestic area with several buildings, courtyards, granaries and ovens⁵⁰. A total of five seal impressions of Khyan have been published in a preliminary report by Chiara Reali⁵¹. Also in this area sealings of Khyan have been found in the same strata as seal impressions dateable to the 13th Dynasty⁵².

Thus, for the first time seal impressions of Khyan could have been associated with archaeological material. According to the evidence from Tell el-Dab^a, the reign of Khyan should probably be dated to stratum E/1 or D/3 with some sealings also appearing in stratum D/2, while it is also important to stress that sealings of Khyan appear in the same archaeological phases as sealings of the 13th Dynasty.

According to the most recent assessment by Manfred Bietak the transition from stratum E/1 to D/3 should be dated to ca. 1590 B.C.⁵³. Absolute dating evidence for Tell el-Dab^a is based on links between the site's stratigraphy with the historical chronology of Egypt. According to the excavator four datum lines link the site's stratigraphy to the Egyptian historical chronology⁵⁴. The 5th year of Senusret III was linked to the construction of the Middle Kingdom temple at 'Ezbet Rushdi at the start of stratum K, the palatial compound excavated in area F/II (see above) was attributed to Khyan, the end of stratum D/2 was interpreted as the conquest of Avaris by Ahmose and the end of the Second Intermediate Period, and several scarabs with kings' names (from Ahmose to Amenhotep II) were used to link stratum C/2 to the early New Kingdom (fig. 1).

⁴⁴ Bietak et al. 2012/2013, 23.

⁴⁵ Aston 2012, 160.

⁴⁶ Forstner-Müller – Rose 2012, 184.

⁴⁷ Sartori 2009, 286–287 with fig. 8; Bietak 2010b, 987; Bietak et al. 2012/2013, 25.

⁴⁸ Sartori 2009, 285–286 with fig. 7. For a recent discussion on the Khyan sealings of area F/II and the dating problems s. I. Forstner-Müller this volume.

⁴⁹ Sartori 2009, 284–285 with figs. 4–5.

⁵⁰ Forstner-Müller – Rose 2012/2013.

⁵¹ Reali 2012/2013. See also I. Forstner-Müller – C. Reali same volume.

⁵² Reali 2012/2013.

⁵³ Bietak 2013, 79 fig. 8, 1.

⁵⁴ See Bietak 2013 and, as a critique, Manning et al. 2014.

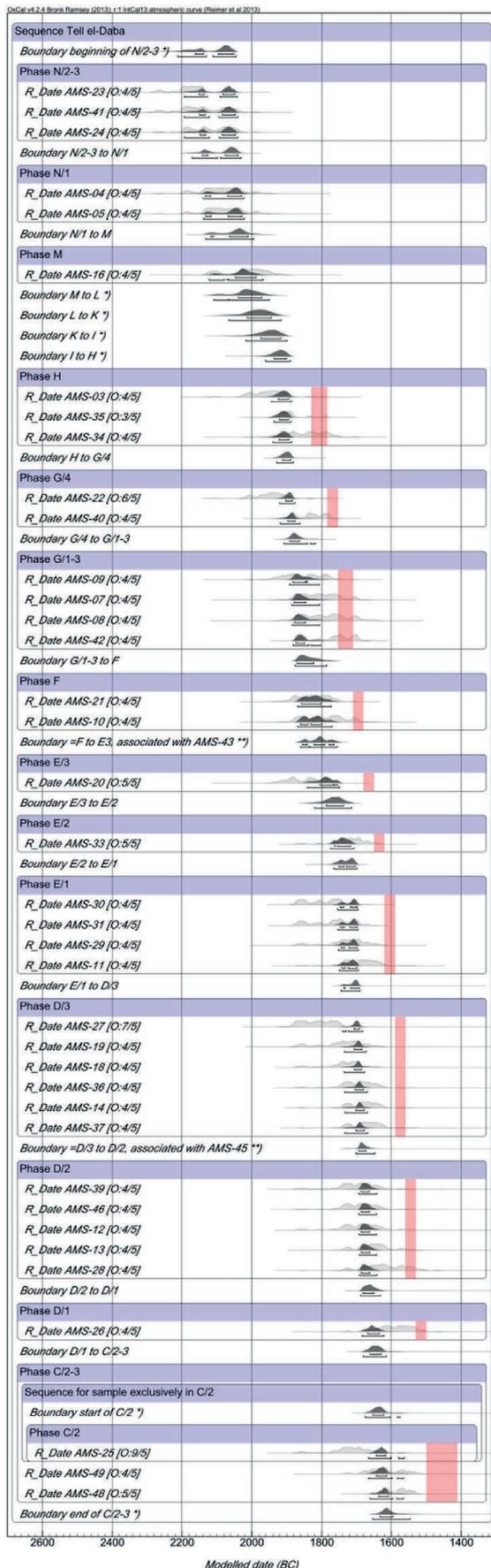


Fig. 2 Bayesian radiocarbon model for the site of Tell el-Dab'a based on Kutschera et al. 2012. The prior information employed by this model is the succession of archaeological strata as outlined by Bietak (Bietak 2013, with references). Light shaded areas indicate individual calibrations, dark shaded areas posterior probabilities (after applying the prior information, i.e. the stratigraphic sequence of the samples, to the individual radiocarbon determinations). Red shaded areas indicate the date of the respective strata according to Bietak

other than, and prior to, radiocarbon analysis in the laboratory⁵⁹. Based on the prior information (in this case the ordering of the samples according to the site's stratigraphy) and the radiocarbon measurements a 'posterior probability' for each individual sample and each transition between their respective phases can be calculated.

But even if only short-lived samples are being tested, there is still always the possibility that outliers may distort the final results. Samples could be residual or intrusive and affect the posterior probability of the calculated model. In this case samples would not agree to the overall model and would show up by a low agreement index in the model. However, in order to avoid the exclusion of samples based on subjective assessment, and in order to determine which samples are most likely to be considered outliers on statistic grounds, the 'General Outlier Model Analysis' of OxCal was employed⁶⁰. This approach detects which individual samples do not fit to the prior information (in this case the sequence according to the site's stratigraphy) and the overall model, and based on their agreement, their impact on the posterior probability is weighted (down) accordingly. Possible outliers would therefore not distort the final result of the model.

For this contribution the model published by Walter Kutschera et al. was run again using the same prior information as outlined in the original article. The only

⁵⁹ Buck et al. 1991; Weninger et al. 2006; Bronk Ramsey 2009a.

⁶⁰ Bronk Ramsey 2009b.

difference is that for this paper the INTCAL13 calibration curve⁶¹ was employed which was not yet available when the paper by Walter Kutschera et al. was published (fig. 2).

On average the results for the Tell el-Dab^a radiocarbon sequence turn out to be about 100 to 120 years older than the dates based on the proposed datum lines and the Egyptian historical chronology. The crucial transition for this contribution, the end of stratum E/1 and the beginning of D/3 that could possibly be associated with Khyan and that was dated by the excavator to ca. 1590 B.C., falls according to the radiocarbon results between 1746 and 1689 B.C. (95.4 % probability) and thus considerably higher than the date proposed by the excavator. However, it is interesting to note that the radiocarbon evidence would be in agreement with dates proposed for Sobekhotep III and Neferhotep I, whose seal impressions have been found as well in connection with the so-called palace of Khyan in area F/II. Sobekhotep III is dated to ca. 1749–1742 B.C. by Kim Ryholt⁶² and to ca. 1725–1722 B.C. by Erik Hornung, Rolf Krauss, and David A. Warburton⁶³ and Neferhotep I to ca. 1742–1731 B.C. by Kim Ryholt⁶⁴ and to ca. 1721–1710 B.C. by Hornung, Krauss, and Warburton (fig. 3)⁶⁵. Jürgen von Beckerath does not provide specific dates but places the 13th Dynasty between ca. 1794/1793 and 1648/1645 B.C.⁶⁶.

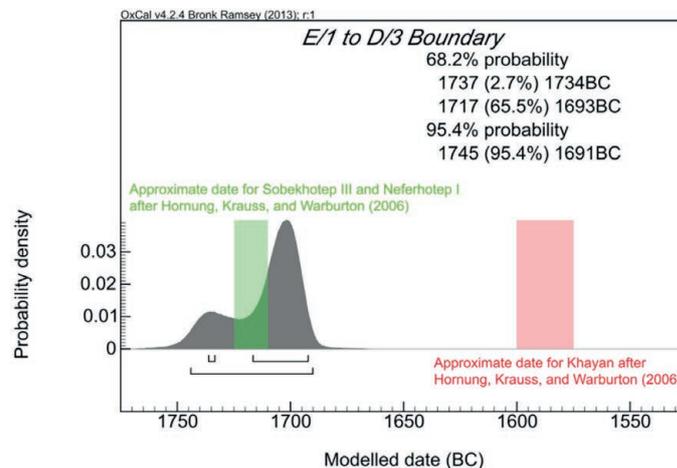


Fig. 3 Calculated date for the transition from stratum E/1 to D/3 based on model in fig. 2 (dark shaded area). Red shaded area indicates approximate date for Khyan according to Hornung et al. 2006, different (slightly higher) suggestions for Khyan are mentioned in the text. Green shaded area indicates approximate dates for Sobekhotep III and Neferhotep I according to Hornung et al. 2006, different (slightly higher) suggestions for these kings are mentioned in the text

The discrepancy between absolute calendar dates based on the datum lines and the stratigraphy of the site as proposed by Manfred Bietak and the radiocarbon record is evident, but does not apply to the Egyptian historical chronology. A recent approach to radiocarbon dating the Egyptian historical chronology by Christopher Bronk Ramsey, Michael W. Dee, and others found that there is a good agreement between scientific (radiocarbon) dating evidence and the traditional historical chronology⁶⁷. This project tested the historical chronologies of the Old, Middle and New Kingdoms against radiocarbon data by utilizing a Bayesian probability approach, using the

⁶¹ Reimer et al. 2013.

⁶² Ryholt 1997, 408 tab. 94.

⁶³ Hornung et al. 2006, 492.

⁶⁴ Ryholt 1997, 408 tab. 94.

⁶⁵ Hornung et al. 2006, 492.

⁶⁶ von Beckerath 1997, 189.

⁶⁷ Bronk Ramsey et al. 2010; Shortland – Bronk Ramsey 2013.

known sequence of kings and their respective reign lengths (within credible limits) as prior information. The results were in agreement with the conventional historical chronology (utilizing a ca. 1550 B.C. date for the start of the New Kingdom), also allowing a slightly higher chronology for the early New Kingdom (within a few decades)⁶⁸. Thus, one has to conclude that archaeological/historical dating evidence for the site of Tell el-Dab^ca is flawed, as a systematic error within the radiocarbon dating methodology can be ruled out. Nevertheless, the excavator maintains that the archaeological dating of Tell el-Dab^ca is still valid and that some other reasons, such as a so far unknown environmental effect of the Nile Delta, must lead to the divergent dates at the site⁶⁹.

This apparent difference between radiocarbon dates on the one hand and archaeological/historical estimates as proposed by the excavator will be further discussed below in section 5. At this point it is important to note that (a) radiocarbon dates provide absolute dates that are in conflict with calendar dates proposed by the excavator and suggest a ca. 100 to 120 years higher chronology for the site and (b) radiocarbon results for the transition from stratum E/1 to D/3 are in conflict with a conventional date of Khyan around ca. 1600 B.C. but are (c) in agreement with dates proposed for the 13th Dynasty rulers whose seal impressions have been found in the archaeological layers of the palace as well.

3 The Khyan lid at Knossos and Aegean chronology

One of the most important objects that served as an argument for postulating an extensive Hyksos empire throughout the Eastern Mediterranean, is the alabaster lid inscribed with Khyan's name found by the excavations of Arthur Evans at Knossos in the campaign of 1901⁷⁰. The lid was found in the area around the so-called North Lustral Basin in »a well-marked stratum containing a large proportion of charcoal and representing the burnt remains of an earlier structure«⁷¹. The relative position of this stratum compared to the younger (Mycenaean) remains was clearly published in a section drawing by Arthur Evans⁷². Evans reports that the same deposit »contained numerous fragments of stone vases ... covered with a very realistic plait-work in relief – in fact a complete stone imitation of basketry.«⁷³. The same charcoal stratum has also been traced within the lustral basin and based on pottery and stone vessels found in these deposits, Evans dated this stratum to the Middle Minoan IIIA period⁷⁴. The Khyan lid was thus one of the few objects that provided a direct link between the Egyptian historical chronology and the Aegean relative chronological sequence. Already in 1909 Diedrich Fimmen used this object as a *terminus post quem* for the beginning of the Late Minoan period⁷⁵ and Friedrich Matz stated that »the most important evidence for the end of the Early Palace Period is an alabaster lid with the cartouche of the Hyksos king Khyan ... which was found together with M.M. IIIA pottery at Cnossus ...«⁷⁶, a view that was also shared by Mervyn Popham⁷⁷.

The date proposed by Evans was later challenged by Leonard Palmer⁷⁸. He pointed out that Evans »never reproduced any of the Middle Minoan III A pottery said to have been associated with the lid«⁷⁹ and referred to an entry of Duncan Mackenzie's 1901 pottery notebook, where he

⁶⁸ Bronk Ramsey et al. 2010. See also Manning 2014.

⁶⁹ Bietak 2013.

⁷⁰ Evans 1900/1901; Evans 1921, 405–422; Höflmayer 2012a, 172–175 with references; Manning 2014, 35–37 with references.

⁷¹ Evans 1900/1901, 64. See also: Evans 1921, 406 fig. 291; 418.

⁷² Evans 1900/1901, 64 fig. 20. See also: Evans 1921, 418 fig. 303.

⁷³ Evans 1900/1901, 66.

⁷⁴ Evans 1921, 410. 421.

⁷⁵ Fimmen 1909, 62–63; Fimmen 1924, 172–173.

⁷⁶ Matz 1973, 143.

⁷⁷ Popham 1970, 226.

⁷⁸ Palmer 1969, 54–58.

⁷⁹ Palmer 1969, 56; Palmer 1981.

lists under the heading »Lot from N. Foundations – area of Egyptian Lid« also pottery that may be classified as Late Minoan IIIA⁸⁰. Palmer's conclusion thus was that the Khyan lid was found in a mixed context and therefore could not be used as a *terminus post quem* for the beginning of the Late Minoan period at all.

However, the date proposed by Evans was also defended by numerous scholars⁸¹. It has been pointed out that Duncan Mackenzie's notebook entry might not be a solid argument since Mackenzie never stated that he was listing pottery from stratigraphical units, but instead clearly refers only to the »lot« from the northern foundations: »Mackenzie is simply describing sherds, not strata.«⁸². Thus, his entry does not apply to the charcoal layer proper where the Khyan lid was found, but instead to the whole area (where Mycenaean walls have been found as well). In fact, Leonard Palmer also admitted that this might indeed be a possibility but rejected this idea with the argument that »if ... he was capable of such stratigraphic confusion, then we should have to deny all scientific value ... to the Knossos stratigraphy as a whole.«⁸³. However, it seems that Duncan Mackenzie himself was not confused at all, but in fact convinced about the Middle Minoan III date: In the second edition of Diedrich Fimmen's posthumously published »Kretisch-mykenische Kultur« we read: »Daß die Datierung der Fundschicht in die Übergangsepoche ganz sicher ist, hat mich ... Herr Mackenzie nach seinen Beobachtungen während der Ausgrabung versichert.«⁸⁴. Another entry by Mackenzie for April 3rd 1901 also allows the conclusion that he dated the charcoal layer to Middle Minoan III, as Jacqueline Phillips has pointed out⁸⁵.

Also recent research corroborated a Middle Minoan III date for the context of the Khyan lid⁸⁶. Colin Macdonald referred to a stone cist excavated in 1929 and associated with black earth, dateable to Middle Minoan IIIB. He points out that »if the content of the ... cist represents material from the destruction of the entire area during MM IIIB, the Lustral Basin deposit may well be contemporary. This might also be the most appropriate horizon for the Khyan lid found near the Lustral Basin and the cist.«⁸⁷. A Middle Minoan III date was also recently supported by Alexander MacGillivray⁸⁸.

The question of the date of the Khyan lid context became one of the key issues in Aegean Bronze Age chronological research. Since the 1980ies, discussions circled around the absolute dating of the Minoan Santorini eruption, dateable in relative chronological terms to the late Late Minoan IA period⁸⁹. While the conventional (Low) chronology dated the Santorini eruption after the beginning of the New Kingdom in Egypt, around ca. 1500 B.C., the High (radiocarbon based) chronology set the eruption to the second half of the 17th century B.C., between 1650 and 1600 B.C., in recent years favouring a date just before 1600 B.C.

Arguments for a low date of the Santorini Minoan eruption included Egyptian stone vessels that were dated to the early 18th Dynasty found in (pre-eruption) Late Helladic I shaft graves IV and V at Mycenae, the first appearance of Cypriot White Slip I pottery on Santorini in a pre-eruption context and in stratum C/3 contexts at Tell el-Dab'a (dated by the excavator to the Thutmosid period, but see our remarks on the excavator's dates vs. radiocarbon dates for the site above) and the first appearance of Minoan pumice from the Santorini eruption in stratum C/2 (dated by the excavator to late Thutmosis III and Amenhotep II) (see also fig. 1 and below section 6)⁹⁰. The

⁸⁰ Palmer 1969, 142–143.

⁸¹ For a detailed discussion see Höflmayer 2012a, 172–175.

⁸² Warren 1987, 206–207; Warren 1988, 176.

⁸³ Palmer 1969, 57.

⁸⁴ Fimmen 1924, 173 n. 1.

⁸⁵ Phillips 2008, II, 97.

⁸⁶ See also Höflmayer 2012a, 172–175.

⁸⁷ Macdonald 2002, 44–45.

⁸⁸ MacGillivray 2013, 223.

⁸⁹ Warburton 2009; Meller et al. 2013; Manning 2014.

⁹⁰ See e.g. Höflmayer 2009; Warren 2009; Wiener 2009b; Warren 2010a; Warren 2010b; Bietak 2013; Wiener – Earle 2014.

Khyan lid deposit at Knossos and its Middle Minoan III date was still used by Peter Warren and Vronwy Hankey as a *terminus post quem* for the beginning of Late Minoan IA in their seminal 1989 volume on »Aegean Bronze Age Chronology«⁹¹, but was disregarded in the chronological discussion later on. Nevertheless, the present author regarded the context as reasonably valid and argued that Middle Minoan III must have ended during or after the reign of Khyan accepting a ca. 1600 B.C. date for his reign⁹².

Using a ca. 1600 B.C. date as a *terminus post quem* for the end of Middle Minoan III and the beginning of the Late Minoan IA period is obviously in conflict with the High (radiocarbon based) chronology for the Minoan eruption of Santorini⁹³. The High radiocarbon chronology for the Aegean early Late Bronze Age rests on a substantial and coherent set of radiocarbon data from several sites: radiocarbon determinations for 25 short-lived samples from the Volcanic Destruction Layer (VDL) of the Akrotiri settlement on Santorini provide dating evidence for the last occupation phase before the eruption. Here, we employ a Bayesian model and treat these dates as a group of events assumed to be distributed exponentially towards the end of the pre-eruption phase (using a Tau_Boundary paired with a Boundary in OxCal)⁹⁴. Based on this model the end date for the settlement at Akrotiri falls in the second half of the 17th century B.C. (1630–1613 [68.2 % probability] and 1642–1604 [95.4 % probability]) (fig. 4 a. b). While the radiocarbon determinations from the VDL provide dates for the last occupation of the pre-eruption phase, radiocarbon dates for a branch of an olive tree of 72 years presumably killed by the eruption and buried by the fallout deliver a calendar date for the event as such⁹⁵. Four segments of the branch have been radiocarbon dated, covering tree rings 1–13, 14–37, 38–59 and 60–72. According to this model the last tree ring (bark) dates to 1626–1615 (68.2 % probability) or 1632–1611 (95.4 % probability) and is in perfect agreement with the results for the settlement (fig. 5). Consistent dates have also been published for tsunami deposits linked to the Minoan eruption at Palaikastro on Crete⁹⁶, the transition from phase K to phase L at Aegina Kolonna, dated to the Late Helladic I/II transition⁹⁷, and for the Lerna shaft graves⁹⁸. One might also mention that the radiocarbon dates for stratum C/2–3 at Tell el-Dab^ca (with the first appearance of Cypriot White Slip I pottery, which is also known from pre-eruption contexts from Santorini, and pumice from the Minoan eruption), argued to be contemporary with, or just slightly later than, the Minoan eruption of Santorini, fall to the second half of the 17th century B.C. as well. The end date for stratum C/2–3, in which the first appearance of Cypriot White Slip I pottery and Minoan pumice falls, dates to 1633–1597 (68.2 % probability) or 1655–1546 (95.4 % probability) (fig. 6)⁹⁹.

Thus, there is a difference of about 100–120 years between the conventional (Low) and the radiocarbon (High) chronology for the Aegean early Late Bronze Age. Accepting a Middle Minoan III date for the Khyan lid deposit at Knossos and using a ca. 1600 B.C. date for his reign would be in agreement with the Low chronology and an eruption date around 1550–1500 B.C., but would be in opposition to a radiocarbon-based high date in the second half of the 17th century B.C. We will address this question further below in section 6.

⁹¹ Warren – Hankey 1989, 136–137.

⁹² Höflmayer 2012a, 175.

⁹³ See e.g. Manning et al. 2006; Friedrich et al. 2006; Höflmayer 2012b; Manning et al. 2014; Manning 2014; Friedrich et al. 2014.

⁹⁴ Höflmayer 2012b; Manning et al. 2014.

⁹⁵ Friedrich et al. 2006. The validity of the olive tree was refuted by Cherubini arguing that tree-rings in olive trees are difficult to discern (Cherubini et al. 2013; Cherubini et al. 2014), but even if the tree-ring count by Friedrich et al. is disregarded, the date for the last (youngest) tree ring (bark) remains in the 17th c. B.C. as has been shown by Manning et al. 2014.

⁹⁶ Bruins et al. 2008; Bruins et al. 2009.

⁹⁷ Wild et al. 2010.

⁹⁸ Lindblom – Manning 2011.

⁹⁹ Kutschera et al. 2012.

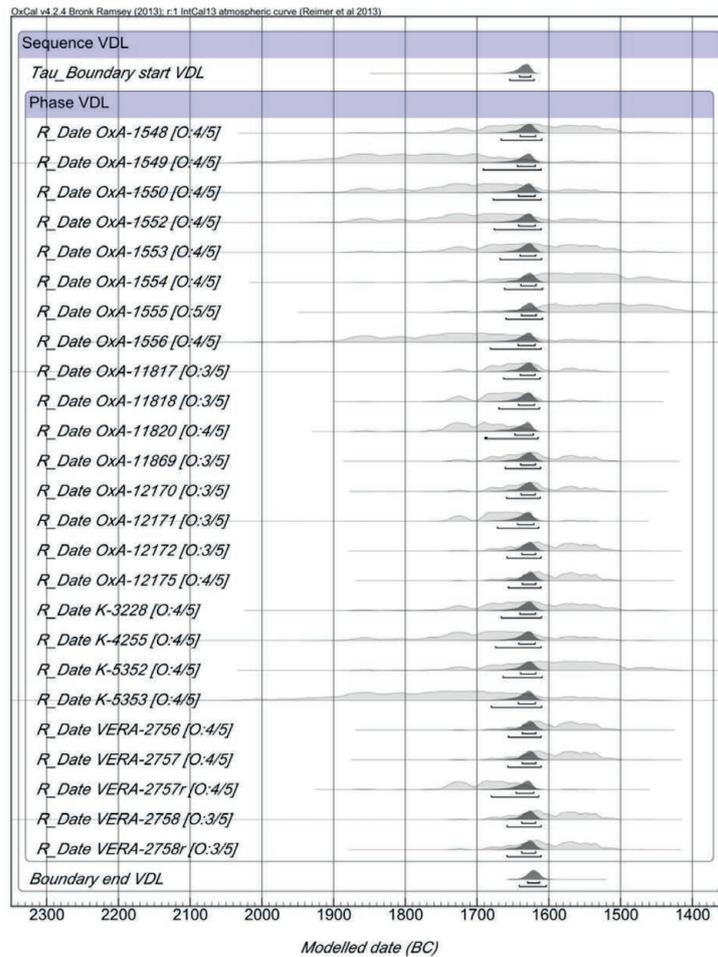


Fig. 4 a Bayesian radiocarbon model for short-lived samples from the Volcanic Destruction Layer (VDL) of Akrotiri based on (Manning et al. 2014). Light shaded areas indicate individual calibrations, dark shaded areas posterior probabilities

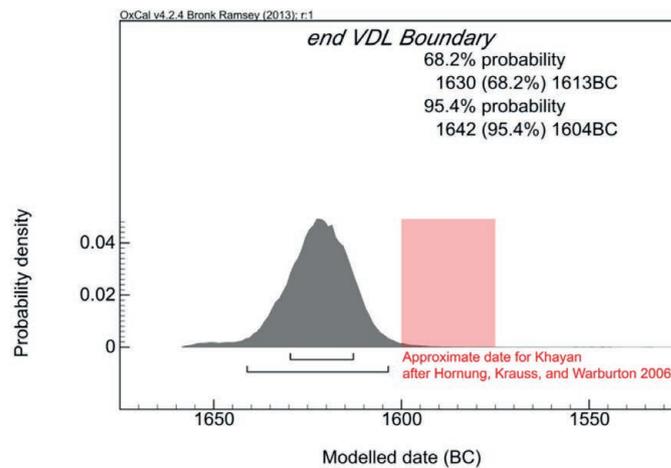


Fig. 4 b Calculated end date for the Volcanic Destruction Layer (VDL) based on model of fig. 4 a. Red shaded area indicates approximate date for Khyan after Hornung et al. 2006. Different (and slightly higher) dates for Khyan are mentioned in the text. Obviously the conventional date for Khyan is incompatible as a *terminus post quem* for the Minoan eruption of Santorini

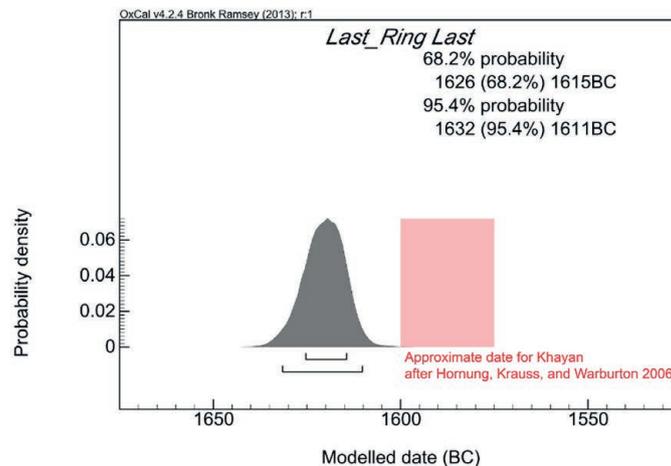


Fig. 5 Calculated date for the last ring of the olive tree and for the Santorini eruption based on Friedrich et al. 2006. Red shaded area indicates approximate date for Khyan after Hornung et al. 2006. Different (and slightly higher) dates for Khyan are mentioned in the text. Obviously the conventional date for Khyan is incompatible as a *terminus post quem* for the Minoan eruption of Santorini

4 The Tell Edfu Khyan sealings

The best evidence for Khyan within the historical sequence of Second Intermediate Period rulers and within the archaeological sequence of the period comes from the Upper Egyptian site of Tell Edfu. Numerous sealings of Khyan have recently been found in contexts of an administrative building, excavated by the Oriental Institute of the University of Chicago under the direction of Nadine Moeller since 2005¹⁰⁰. These finds, some 70 km south of Gebelein (see above), are the most southward attestation of the name of Khyan so far.

The excavator reports that the administrative building was constructed during the first half of the 12th Dynasty and went out of use some time during the second half of the 13th Dynasty. The dominating element of this building is a columned hall. Prolonged use of this hall is proven by a considerable number of successive floors that accumulated during the structure's history. Within these floors, negative impressions of jars were found that also included sealings of Amenemhet III and pottery dateable to the late 12th to early 13th Dynasty¹⁰¹. According to the excavators also a radiocarbon date provides additional evidence that these jar imprints date to the late Middle Kingdom¹⁰². Additional floors were laid out above these jar imprints and the sealings of Amenemhet III. While the earlier floors were almost devoid of finds, the surface of the last floor was »particularly abundant in pottery sherds, sealings and other objects«, as the excavators report¹⁰³. Later on, this last floor was covered with Aeolian deposits indicating the abandonment of the building. Subsequently, columns and column bases were removed, followed by »a long stratigraphic sequence (...) which is marked by brief phases of inactivity during which layers of windblown sand and fill layers with refuse and leftovers from leveling operations were deposited in the former columned hall«¹⁰⁴. During the next phase, dateable to the 17th Dynasty, the whole area was transformed into a silo court, where several phases of construction and renovation could have been detected.

¹⁰⁰ Moeller et al. 2011; Moeller 2012. For Tell Edfu in general, see Moeller 2008; Moeller 2009b; Moeller 2010; Moeller 2011.

¹⁰¹ Moeller 2009a; Moeller et al. 2011, 94 fig. 5.

¹⁰² Moeller et al. 2011, 91.

¹⁰³ Moeller et al. 2011, 92.

¹⁰⁴ Moeller et al. 2011, 92.

A second columned hall attached to the north shows the same stratigraphic sequence with successive floors and a final abandonment; although, according to the excavators, the northern columned hall was in use somewhat longer, which is also corroborated by pottery analysis. Ceramic sherds from the abandonment layer of the southern columned hall date to the late 12th and early 13th Dynasty, whereas pottery from the northern columned hall already finds parallels in the early Second Intermediate Period. In this context 41 sealings of king Khyan were found together with 9 sealings of Sobekhotep IV¹⁰⁵.

The deposit of the sealings of Khyan and Sobekhotep IV is thus sandwiched between the late 12th Dynasty (Amenemhet III sealings) and the 17th Dynasty silos that followed the abandonment and subsequent phase of the administrative building. Within the Aeolian deposit covering the last floor, a fragment of a Nubian cooking pot has been found which has parallels in Bauschicht 13 at Elephantine, dated to the late 12th and 13th Dynasty¹⁰⁶. Therefore, the Sobekhotep IV sealings on the last floor cannot be regarded as residual material. The excavators furthermore argue that »the considerable concentration and homogeneity of the Khyan sealings (> 10 % of all sealings found here) in this area indicate an event of opening a group of commodities that arrived together in one delivery at the site« and they also point out that »these sealings were all impressed by the same seal and were attached to wooden boxes and bags of goods, which can be seen on the preserved back-types«¹⁰⁷.

Sobekhotep IV can be firmly placed in the mid-13th Dynasty, as he is mentioned in the Turin Canon 7/27¹⁰⁸. He is dated to ca. 1732–1720 B.C. by Kim Ryholt¹⁰⁹ or to ca. 1709–1701 B.C. by Hornung, Krauss, and Warburton¹¹⁰. A charcoal sample (*acacia raddiana*) found in the same context as the Khyan sealings was analyzed by the Laboratoire de Datation par le Radiocarbone of the Institut français d'archéologie orientale in Cairo and dates to 1750–1661 (68.2 % probability) or 1871–1845 (4.7 % probability), 1812–1803 (1.1 % probability) or (most likely) 1777–1623 B.C. (89.5 % probability) (see fig. 6)¹¹¹. Khyan is usually dated to around 1600 B.C. (see above). In light of the archaeological evidence, the excavators conclude that »Khyan must date earlier than previously thought and [that] there might have been an overlap between the late 13th Dynasty and the early 15th Dynasty«¹¹².

The evidence from Tell Edfu is in agreement with the archaeological situation at Tell el-Dab^ca. At both sites sealings of Khyan occur in contexts together with sealings of the 13th Dynasty, in Tell el-Dab^ca together with Sobekhotep III and Neferhotep I, in Tell Edfu together with Sobekhotep IV. Radiocarbon evidence for Tell el-Dab^ca and apparently also for Tell Edfu is in agreement with dates proposed for the respective 13th Dynasty rulers – again a remarkable agreement between science (radiocarbon dating) and meticulous historical analysis (Egyptian historical chronology), which was also observed by Christopher Bronk Ramsey, Michael W. Dee and others in their project on radiocarbon dating the historical chronology of Egypt¹¹³.

We have outlined above that there is no hard evidence for placing Khyan somewhere in the sequence of rulers of the 15th Dynasty and that a ca. 1600 B.C. date cannot be substantiated. Most of the objects inscribed with his name have not been found in documented contexts – the only exceptions being Knossos, Tell el-Dab^ca, and Tell Edfu. Knossos – of course – is not of much help in trying to determine Khyan's place in the sequence of rulers of the 15th Dynasty or the Second

¹⁰⁵ Moeller et al. 2011, 101 fig. 11. See also the contributions by N. Moeller – G. Marouard as well as N. Ayers in this volume for further details.

¹⁰⁶ Ayers – Moeller 2012, 107.

¹⁰⁷ Moeller et al. 2011, 100.

¹⁰⁸ Ryholt 1997, 408 tab. 94; Allen 2010, 7 tab. 1.

¹⁰⁹ Ryholt 1997, 408 tab. 94.

¹¹⁰ Hornung et al. 2006, 492.

¹¹¹ Moeller et al. 2011, 97.

¹¹² Moeller et al. 2011, 107.

¹¹³ Bronk Ramsey et al. 2010.

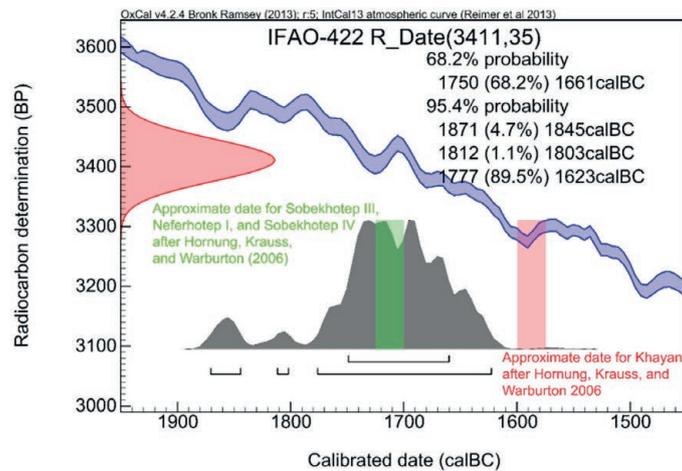


Fig. 6 Calibrated radiocarbon determination for charcoal sample found in the same context as the Khyan sealings at Tell Edfu. Red shaded area indicates approximate date for Khyan after Hornung et al. 2006. Green shaded area indicates the approximate dates for Sobekhotep III, Neferhotep I, and Sobekhotep IV after Hornung et al. 2006. If the actual date for Khyan falls to this date range (as indicated by seal impressions of these rulers found in association with seal impressions of Khyan at Tell el-Dab^a and Tell Edfu), this date would be consistent with the radiocarbon evidence from Tell Edfu

Intermediate Period in general, as the Aegean chronology is in itself dependent on Egypt (at least before radiocarbon data became available – although the dataset for the Middle Minoan period is still far from being satisfying). So we are left with Tell el-Dab^a and Tell Edfu for determining Khyan's position within the Second Intermediate Period framework. As has been shown above, in both cases his seal impressions show up together with seal impressions from the 13th Dynasty. It has been argued before, on the basis of stylistic analysis of scarabs, that Khyan might have been early in the sequence of rulers of the 15th Dynasty. Since his place cannot be established by any other means, one should probably test the working hypothesis that (a) Khyan was one of the earlier rulers of the 15th Dynasty, (b) there was an overlap of the 13th and 15th Dynasties, and (c) Khyan could have been contemporary with Sobekhotep III/IV and Neferhotep I.

Usually, a new hypothesis should solve more problems that it creates. In this case we are in the fortunate position that an early date for Khyan would indeed solve a number of chronological problems, especially concerning the divergent radiocarbon/historical dates for Tell el-Dab^a and the Aegean early Late Bronze Age.

5 Khyan and the end of Low chronologies I: Tell el-Dab^a

The first comments on the seminal paper by Nadine Moeller and Gregory Marouard were very reluctant in accepting a possible upward shift of Khyan based on the evidence from Tell Edfu. Robert Porter and Alexander Ilin-Tomich draw very different conclusions from the evidence from Tell Edfu and both used Tell el-Dab^a as a reference site for Second Intermediate Period chronology. Robert Porter argued that »it is not possible to move Khyan earlier by very much because his dates are limited by the stratigraphic position of his palace and sealings at Tell el-Daba«¹¹⁴ and Alexander Ilin-Tomich, while admitting that »the Khyan sealings from Edfu clearly indicate that this king predated the final stages of Dynasty 17«, pointed out that they nevertheless »do not provide sufficient evidence for his [Khyan's] contemporaneity with Sobekhotep IV« and that »the

¹¹⁴ Porter 2013, 75.

temporal distance between Sobekhotep IV and Khyan can be matched with the distance between Phases G/1–3 and E/1 in the stratigraphy of Tell el-Dab^ca¹¹⁵.

Both authors thus relied on the stratigraphic sequence of Tell el-Dab^ca and the absolute calendar dates proposed for it by Manfred Bietak. As we have seen above, radiocarbon dates are in conflict with the dates proposed by the excavator whereas for the transition from stratum E/1 to D/3 (the date for L81 where the Khyan sealings have been found), the radiocarbon evidence indeed points to a date compatible with the 13th Dynasty (see above). Therefore, it would be useful to review absolute dating evidence for the stratigraphic sequence at Tell el-Dab^ca according to the proposed datum-lines.

The two main datum-lines used by Manfred Bietak to date the stratigraphy of Tell el-Dab^ca are the stela of Senwosret III associated with the erection of the Middle Kingdom temple at ^cEzbet Rushdi in stratum K and the abandonment of Avaris at the end of stratum D/2. However, both datum lines are problematical.

In ^cEzbet Rushdi (area R/I), excavations revealed a planned settlement phase that was rebuilt several times (local str. e/1–4 = str. L of the main stratigraphy), followed by courtyards and rectangular compartments (local str. d) and finally, in stratum c/1–2, equivalent to stratum K of the main stratigraphy, by the Middle Kingdom temple that remained in use in stratum b¹¹⁶. The stela in question was found during the earlier excavation of the temple by Shehata Adam in the 1950ies¹¹⁷. The text is dated to the 5th year of Senusret III and reports »(land) cubits belonging to the Estate of Amenemhet, justified, belonging to *R3-w3ty*, which are on the waters of this town and which are north of the estate of in *Htt*y in *R3-w3ty*: 26 cubits«¹¹⁸. Adam also reports that he found two statues mentioning Amenemhet I in the hypostyle hall of the temple¹¹⁹. He therefore dated the construction of the temple to the times of Amenemhat I and interpreted the stela as referring to an enlargement of the temple during the times of Senusret III.

Manfred Bietak on the other hand claimed that the temple itself could not have been founded by Amenemhet I, because already the settlement phases underneath (str. e/1–4) had to be dated later than the beginning of the 12th Dynasty, since they contained pottery types more evolved than those from the nearby settlement of area F/I (local str. e), the latter dated to Amenemhet I and Senusret I¹²⁰. Contrary to Shehata Adam, Bietak argued that the stela of Senusret III does not refer to an enlargement of the temple, but to the foundation itself. Bietak read 26 *mḥ* not as cubits but as 2,600 square cubits¹²¹. However, the original temple itself only measured 45 × 45 cubits (2,025 square cubits), some 575 square cubits less than what Bietak read in the stela. He therefore proposed that the area referred to in the stela also included a strip of additional 3 cubits around the temple, thus 51 × 51 cubits (2,601 square cubits), roughly equivalent to the 2,600 mentioned in the text. Thus, Bietak dated the original temple to the time of Senwosret III or slightly earlier¹²².

There are several serious problems with this datum line. First, the planned settlement of area F/I (local stratum e) which is dated to Amenemhet I and Senwosret I and which is supposed to be earlier than the settlement beneath the Middle Kingdom temple of area R/I is devoid of any epigraphic dating evidence¹²³. Also pottery seriation was not possible for area F/I stratum e because the stratum sits on virgin soil and is followed by a hiatus in occupation afterwards¹²⁴. The ultimate basis for the Amenemhet I – Senusret I date for area F/I stratum e are pottery comparisons with Stefan Seidlmayer's ›Stufensystem‹ – a typological approach based on tomb repertoires,

¹¹⁵ Ilin-Tomich 2014, 151.

¹¹⁶ Bietak – Dorner 1998; Bietak 2013, 79 fig. 8, 1.

¹¹⁷ Adam 1959.

¹¹⁸ Adam 1959, 216 (translation after Fischer 1961).

¹¹⁹ Adam 1959, 213–214.

¹²⁰ Bietak – Dorner 1998, 17. For the area F/I settlement, see Czerny 1999 and Czerny 2012b.

¹²¹ As was also suggested by Fischer 1961 and Kees 1962.

¹²² Bietak – Dorner 1998, 17–19. See also Goedicke 2002.

¹²³ Czerny 1999, 120–121; Czerny 2012b.

¹²⁴ Czerny 1999, 120–121.

most of it excavated in the early days of Egyptology and in itself only a relative chronological assessment with very limited possibilities for linking it to the Egyptian historical chronology¹²⁵. However, while Bietak dated stratum e of area F/I to the early 12th Dynasty¹²⁶, Ernst Czerny did not rule out an earlier date sometime during the late First Intermediate Period¹²⁷. Thus, dating evidence for stratum e of area F/I seems to be rather imprecise and therefore any assumed date for stratum e/1–4 beneath the temple of ^cEzbet Rushdi remains rather vague as well.

Also Bietak's interpretation of the stela is problematic. Although the text mentions land that obviously belongs to the temple, it remains unclear whether the 2,600 square cubits refer to the original lot or to an enlargement or to additional land that was granted to the temple. Also Ernst Czerny recently expressed some skepticism about using the stela as a datum line: »It remains unclear, whether the stele relates to the original establishment of the temple or to an enlargement only. Even that it is unrelated to this particular temple, but was brought here from a proximate structure cannot be excluded. A few particularities of the stele, including the fact that the king's name is not enclosed into a cartouche, could possibly imply that it is not a contemporary document, but rather stems from the SIP.«¹²⁸.

While Bietak proposed that the 5th year of Senusret III should be regarded as a *terminus ad quem* for the beginning of stratum K of the main stratigraphy, a more cautionary (and realistic) approach would be to regard the 5th year of Senusret III as a *terminus post quem* for the end of the temple (which was still used in local str. b, equivalent to str. I and K of the main stratigraphy) and only if we assume that the stela was found in the archaeological phases actually belonging to the temple (as described by Shehata Adam, although without providing any photos or drawings).

A firm link between the 5th year of Senusret III mentioned on the stela and the construction of the temple in stratum K, however, cannot be established. This datum line should therefore be disregarded.

Also the second main datum line, the fall of Avaris at the end of stratum D/2 has to be met with criticism. Although no violent destruction is attested at the site, settlement activity in area A stops with the end of stratum D/2, which is interpreted by Bietak as the conquest and abandonment of Avaris¹²⁹. The end of the Second Intermediate Period in area H was linked by Bietak to the transition from a citadel with buttressed fortification wall, gardens, and a monumental building to an area used for storage facilities and silos. He argued that the grain silos might have been a »make-shift facility for supplying troops«¹³⁰ and therefore implying a link to the conquest of Avaris by the troops of Ahmose¹³¹. This is, however, an interpretation. There is no hard evidence to link the end of the Second Intermediate Period to the transition from stratum D/2 to D/1. An abandonment of a part of a site or a change in use of a certain area without any epigraphic evidence can hardly be used as a secure datum line for chronological purposes.

A link between the Khyan seal impressions in stratum c of area F/II and the transition from stratum E/1 to D/3 seems to be probable. The datum lines that helped to bracket stratum K–D/2 between the 5th year of Senwosret and the fall of Avaris and between which the 11 archaeological strata were interpolated are highly questionable and cannot be used for absolute dating evidence. While the link between the transition from stratum E/1 to D/3 and Khyan would remain valid, one has to reassess the absolute dating of this transition and according to radiocarbon dating this transition falls to the second half of the 18th century B.C., the highest probability being around 1700 B.C. – exactly the time where one would date Sobekhotep III and Neferhotep I whose seal

¹²⁵ Seidlmayer 1990.

¹²⁶ See recently Bietak 2013, 79 fig. 8, 1.

¹²⁷ Czerny 2012b, 51.

¹²⁸ Czerny 2012a, 61.

¹²⁹ Bietak 1991, 47.

¹³⁰ Bietak et al. 2007b, 18.

¹³¹ Bietak et al. 2007b, 14–20.

impressions were found in the same stratum c of area F/II where the Khyan seal impressions came from (see fig. 3).

We may therefore conclude that radiocarbon dating and the Egyptian historical chronology is indeed in agreement as has also been shown by Christopher Bronk Ramsey, Michael W. Dee and others, even at the site of Tell el-Dab^ca. The only offset observable are the absolute calendar dates based on the datum lines as proposed by Manfred Bietak.

The archaeological and radiocarbon evidence from Tell el-Dab^ca is thus in agreement with the archaeological evidence from Tell Edfu, supports a higher dating of Khyan and a (partial) overlap of the 13th and 15th Dynasties.

6 The end of Low chronologies II: the Minoan Santorini eruption

The discussion about the absolute calendar date of the Minoan Santorini eruption is ongoing for decades now. We have pointed out in section 3 above that while the conventional (Low) chronology would place the eruption in the late 16th century B.C., the radiocarbon based (High) chronology dates this event to the late 17th century B.C.

This is not the place to discuss the arguments for and against the conventional chronology (again)¹³², instead we will mention the main arguments put forward by the adherents of the Low chronology and review them in the light of the above discussed new chronological assessment of Khyan and his place within the Second Intermediate Period of Egypt.

Arguments for the Low chronology were laid out in detail in a substantial number of articles by Peter Warren, Manfred Bietak and Malcolm Wiener¹³³. The latest comprehensive account on this discussion can be found in the second edition of Sturt Manning's »Test of Time«, arguing for the High chronology, while the present author's recent assessment »Die Synchronisierung der minoischen Alt- und Neupalastzeit mit der ägyptischen Chronologie« reviews the arguments for both approaches without ruling out one or the other¹³⁴.

While the present author was originally reasonably convinced of the Low chronology and the dates for the stratigraphy of Tell el-Dab^ca proposed by Manfred Bietak and defended the conventional dating several years ago¹³⁵, a substantial number of new radiocarbon data from secure contexts has become available since then that change the overall picture substantially. The sequence for Tell el-Dab^ca published by Walter Kutschera et al. showed a distinct difference between the archaeological/historical assessment and the scientific dating evidence, while Bronk Ramsey et al. found no difference between radiocarbon dating and the Egyptian historical chronology¹³⁶. In recent years, radiocarbon evidence for Middle Bronze Age sites such as Tell el-Burak, Tell Ifshar or Tel Kabri has become available that show good agreement with the Tell el-Dab^ca dates and the respective pottery parallels¹³⁷, thus implying that the problem of science versus archaeology (as it was put by Manfred Bietak in a paper several years ago)¹³⁸, (a) does not exist in this way, and (b) could be traced back to the questionable datum lines for Tell el-Dab^ca reviewed above¹³⁹.

Most arguments in favor of a Low chronology for the Minoan eruption of Santorini were already disputed in the literature and should be regarded as highly dubious and in the best case as

¹³² For the most recent comprehensive assessment, see Manning 2014.

¹³³ Warren – Hankey 1989; Warren 2006; Wiener 2006; Warren 2009; Wiener 2009a; Wiener 2009b; Warren 2010a; Warren 2010b; Wiener 2010; Bietak 2013; Bietak 2014; Wiener – Earle 2014.

¹³⁴ Höflmayer 2012a; Manning 2014.

¹³⁵ Bietak – Höflmayer 2007; Höflmayer 2009.

¹³⁶ Bronk Ramsey et al. 2010; Kutschera et al. 2012.

¹³⁷ Marcus 2013; Höflmayer 2015; Höflmayer 2016a; Höflmayer 2016b. For a recent rejoinder from the side of Low chronology, see Ben-Tor 2018.

¹³⁸ Bietak 2003a.

¹³⁹ For the questionable datum lines, see above and Manning et al. 2014; Höflmayer 2015.

inconclusive¹⁴⁰. These include (a) Egyptian stone vessels found in the Mycenaean shaft graves, (b) the first appearance of Cypriot White Slip I pottery in the Aegean, Egypt, and the Levant, (c) pumice of the Minoan eruption of Santorini found in archaeological contexts in Egypt and the Levant, and (d) the Khyan lid found at Knossos.

The first argument (a) uses two stone vessels of presumed Egyptian provenance that were found in the shaft graves at Mycenae, dated by Peter Warren to the early 18th Dynasty, while their Aegean context is Late Helladic I and therefore clearly pre-eruption. Thus, it was argued that these stone vessels (and therefore the early 18th Dynasty) deliver a *terminus post quem* for the Santorini Minoan eruption, which therefore could not have occurred before ca. 1550 B.C. (the traditional date for the beginning of the New Kingdom in Egypt)¹⁴¹. However, stone vessels are notoriously difficult to date because we are lacking comprehensive studies on Egyptian stone vessels of the Second Intermediate Period and the New Kingdom and usually only isolated parallels can be mentioned¹⁴².

One of these vessels, an Egyptian alabastron found in shaft grave V of grave circle A¹⁴³ does indeed have parallels in the early 18th Dynasty, but a Second Intermediate Period date cannot be ruled out, as even Peter Warren had to admit¹⁴⁴. Nevertheless, also the parallels cited by Peter Warren are extremely problematic. He refers to a plate published in a volume on stone vessels from the Metropolitan Museum by Christine Lilyquist, but originally published by Howard Carter in his report on the excavation of what he regarded as the tomb of Amenhotep I (today referenced as tomb AN B) at Dra^c Abu el-Naga¹⁴⁵. However, first, the shapes depicted on this re-used plate do not depict actual stone vessels found in a royal burial of the early 18th Dynasty, but only »debris of broken stone vessels ... scattered in the valley outside the entrance of the tomb, and on the floors of the interior«¹⁴⁶, and, second, tomb AN B does not belong to Amenhotep I but most likely to another unknown member of the royal family of the early to mid-18th Dynasty¹⁴⁷. Therefore, these parallels cannot be used to date the alabastron from shaft grave V with any certainty and should not be used as a *terminus post quem* for the Minoan Santorini eruption¹⁴⁸.

The second stone vessel used by Peter Warren for an early 18th Dynasty *terminus post quem* for the Santorini eruption comes from shaft grave IV, also dated to the Late Helladic I period¹⁴⁹. This vessel is even harder to date in terms of Egyptian chronology. Although Warren maintains that this jug is of early 18th Dynasty date and definitely »not earlier than the New Kingdom«¹⁵⁰, he is unable to name close parallels and only references a very general one from a considerable later period (from the times of Thutmose III)¹⁵¹. Again, the date of this vessel cannot be ascertained with any reasonable precision and therefore this vessel cannot be used as an argument for a Low chronology of the Minoan eruption of Santorini¹⁵².

Another key argument (b) for the Low chronology is the first appearance of Cypriot White Slip I pottery in Egypt and the Levant, since a White Slip I bowl was found in a pre-eruption context on Santorini, and thus the start of White Slip I production on Cyprus pre-dates the Mi-

¹⁴⁰ Latest discussion: Höflmayer 2012b, 440–441; Manning 2014, 37–38; Manning et al. 2014, 1165–1167.

¹⁴¹ Warren 2006; Warren 2009; Warren 2010b.

¹⁴² Studies like Aston 1994, Lilyquist 1995 or Sparks 2007 do not critically review contexts and dating.

¹⁴³ Höflmayer 2012a, 176–179.

¹⁴⁴ Warren 2010b, 68.

¹⁴⁵ Carter 1916, pl. 22; Lilyquist 1995, 86 fig. 24.

¹⁴⁶ Carter 1916, 151.

¹⁴⁷ Polz 2007, 194–197.

¹⁴⁸ See also Höflmayer 2012b, 440–441; Manning 2014, 37–38; Manning et al. 2014, 1166–1167.

¹⁴⁹ Höflmayer 2012a, 175–176.

¹⁵⁰ Warren 2010b, 67.

¹⁵¹ Lilyquist 1995, 120 fig. 154.

¹⁵² See also Höflmayer 2012b, 440–441; Manning 2014, 37–38; Manning et al. 2014, 1166–1167.

noan eruption¹⁵³. According to Manfred Bietak »White Slip I Ware ... turns up for the first time in Egypt and the Levant several decades after the beginning of the New Kingdom«¹⁵⁴, and therefore the Minoan eruption of Santorini should be dated to the early New Kingdom in Egyptian chronological terms.

This argument is problematic in several ways. First, it is based on the first appearance of White Slip I ware in stratum C/3 at Tell el-Dab^ca and, as we have outlined above in section 2 and 5, dates for Tell el-Dab^ca as proposed by Manfred Bietak are questionable. Epigraphic dating evidence for stratum C/3 is lacking, and although the excavator claimed that stratum C/2 could be dated by scarabs to the late reign of Thutmose III and the early reign of Amenhotep II¹⁵⁵, this claim is not conclusive. The scarabs inscribed with kings' names Bietak refers to derive from a small workshop, »the walls of which abutted on the eroded eastern ramp attached to the Palace (F)«¹⁵⁶, one of the so-called Thutmosid palaces of stratum C/2–3, which, however, cannot be dated by epigraphic evidence. Based on the published evidence, they have to be earlier than the workshop, the latter obviously actually belonging to the Thutmosid period, but it remains elusive for now how much earlier the stratum C/2–3 palaces are. However, it should be mentioned here that in the beginning the palaces were indeed dated to the end of the Second Intermediate Period¹⁵⁷, a date also corroborated now by radiocarbon evidence (see fig. 7)¹⁵⁸.

But even if the absolute date of stratum C/3 would be beyond doubt, White Slip I material is only found in fragmentary condition in secondary or tertiary contexts, no complete vessels have been found *in situ*. The first appearance is thus based on residual material and in fact only a few fragments: Bietak and Hein only mention six pieces deriving from stratum C/2–3 altogether¹⁵⁹ and in fact for two fragments even a date in stratum D/2 (dated by the excavator to the late Hyksos Period, but most likely earlier based on radiocarbon evidence) cannot be ruled out¹⁶⁰.

A cautionary (and realistic) approach would deem to see stratum C/2–3 as a *terminus ante quem* for the beginning of Cypriot White Slip I production with no immediate consequences for the absolute date of the Minoan eruption of Santorini. However, it so happens that indeed the radiocarbon evidence for stratum C/2–3 would fit perfectly to the radiocarbon data for the eruption and thus stratum C/2–3 might be not too long after the actual volcanic event (fig. 7). The first appearance of White Slip I at Tell el-Dab^ca, however, cannot be used as an argument for the Low chronology for Santorini¹⁶¹.

The third argument (c) used in favor of a low chronology employs pumice from the Santorini Minoan eruption that was found in several archaeological contexts throughout the Eastern Mediterranean, but notably, and most abundantly, at Tell el-Dab^ca¹⁶². That these respective finds could be traced back to the Minoan eruption of Santorini was shown by Max Bichler et al. by Neutron Activation Analysis¹⁶³. One might thus conclude that the date of the find contexts delivers an indeterminate *terminus ante quem* for the eruption itself, meaning that the eruption took place an unknown period of time before the first appearance of Minoan pumice in the Eastern Mediterranean. Adherents of the Low chronology, however, and most notably Manfred Bietak, used the first appearance of Minoan pumice as a *terminus ad quem*, thus arguing that the eruption itself must have happened at the time, or little before, the date of the respective find contexts¹⁶⁴.

¹⁵³ Merrillees 2001. For the chronological argument, see: Bietak 1998; Bietak and Hein 2001; Wiener 2001; Bietak 2013; Bietak 2014, 281.

¹⁵⁴ Bietak 2014, 281.

¹⁵⁵ Bietak 2013.

¹⁵⁶ Bietak et al. 2007b, 27.

¹⁵⁷ Bietak et al. 1994, 20–38.

¹⁵⁸ Kutschera et al. 2012.

¹⁵⁹ Bietak – Hein 2001.

¹⁶⁰ DAB 378 and DAB 383: Maguire 2009.

¹⁶¹ Höflmayer 2012b, 442–443; Manning 2014, 39–41; Manning et al. 2014, 1175.

¹⁶² For a recent discussion, see Höflmayer 2012b, 441–442; Manning 2014, 31; Manning et al. 2014, 1167.

¹⁶³ See e.g. Bichler et al. 1997; Bichler et al. 2003; Bichler et al. 2006; Steinhauser et al. 2006; Sterba et al. 2009.

¹⁶⁴ Bietak 2013, 90–94; Bietak 2014, 281.

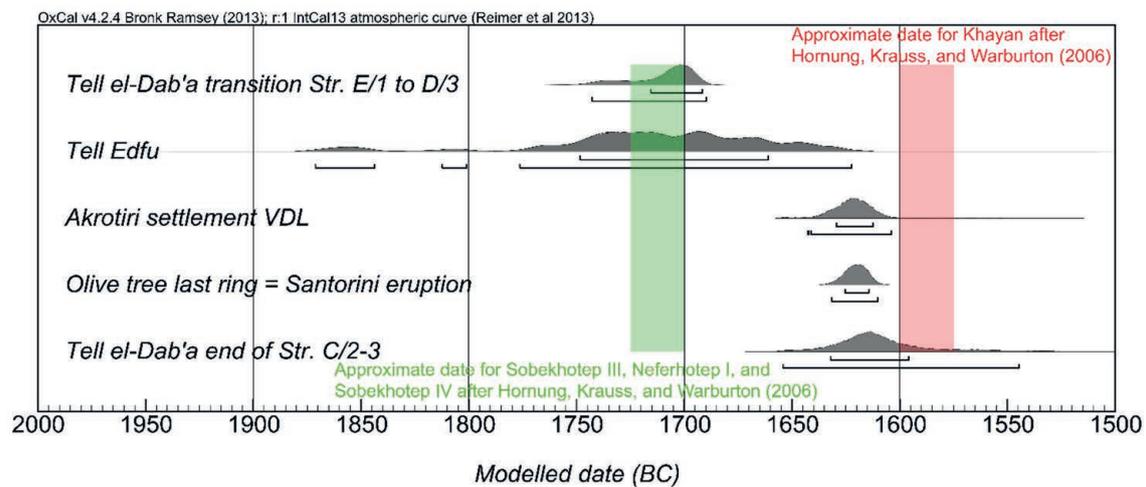


Fig. 7 Combined graph showing the dates for the transition from stratum E/1 to D/3 at Tell el-Dab^a (where the Khyan seal impressions have been found), the Khyan context at Tell Edfu, the Volcanic Destruction Layer (VDL) of Akrotiri, the last ring of the olive tree representing the Minoan eruption of Santorini, and the end of stratum C/2–3 of Tell el-Dab^a, in which the first fragments of Cypriot White Slip I and pumice from the Minoan eruption of Santorini occurs. Radiocarbon evidence for the Santorini eruption is highly consistent and falls to the second half of the 17th century B.C. Red shaded area indicates the approximate date for Khyan after Hornung et al. 2006, different (and slightly higher) dates are mentioned in the text. Obviously using Khyan as a *terminus post quem* for the Santorini eruption employing the radiocarbon (ca. 1600 B.C.) date is impossible. Green shaded area indicates the approximate dates for Sobekhotep III, Neferhotep I, and Sobekhotep IV after Hornung et al. 2006, different (and slightly higher) dates are mentioned in the text. If the actual date for Khyan falls to this date range (as indicated by seal impressions of these rulers found in association with seal impressions of Khyan at Tell el-Dab^a and Tell Edfu), this date would be consistent with the radiocarbon evidence for the transition from stratum E/1 to D/3 (where the Khyan seal impressions have been found at Tell el-Dab^a) and the charcoal date from the Khyan context at Tell Edfu. This date range would also be in agreement with radiocarbon evidence for the Minoan eruption of Santorini, using Khyan as a *terminus post quem* for the end of Middle Minoan III

Pumice first occurs in Tell el-Dab^a in stratum C/2 (see fig. 1) dated to the late reign of Thutmose III and the early reign of Amenhotep II by Manfred Bietak, whereas the radiocarbon sequence puts the end of stratum C/2–3 just before 1600 B.C. with only limited probability within the first half of the 16th century B.C. (see fig. 7 and discussion above). Based on radiocarbon dating, the first appearance of pumice at the site of Tell el-Dab^a is in perfect agreement with the radiocarbon evidence for the eruption itself¹⁶⁵.

However, a substantial amount of pumice from other contexts from Egypt as well as from the Levant was tested as well. Unfortunately, most samples came from contexts dated to the 18th Dynasty and are therefore inconclusive even for the Low chronology. Only a small percentage derives from earlier (i.e. Second Intermediate Period) contexts (which would be useful to determine a possible earlier date for the eruption). Therefore the conclusion drawn by Manfred Bietak that »not a single sample [of pumice from the Minoan eruption] was found before the Thutmosid period in Egypt or the beginning of the Late Bronze Age in the Levant«¹⁶⁶ is of course inevitable (because the project had mostly looked at these periods), but nevertheless irrelevant for chronological purposes as also the team working on pumice of the SCIEM 2000 project concluded: »However, since the number of excavated samples from later periods greatly exceeds the number of samples from the earlier period, the pumice data are still not conclusive.«¹⁶⁷.

¹⁶⁵ Manning 2014, 31.

¹⁶⁶ Bietak 2014, 281.

¹⁶⁷ Sterba et al. 2009, 1738.

The last argument (d), the Khyan lid found in a Middle Minoan III context at Knossos was already discussed above. In 2012 (and still today) the present author regards the lid as a reasonably secure piece of evidence for chronological purposes and accepting a Middle Minoan III date for the find context, the first year of Khyan provides a *terminus post quem* for the end of Middle Minoan III and thus for the Minoan eruption during late Late Minoan IA¹⁶⁸. However, the conventional date of ca. 1600 B.C. for Khyan would render a late 17th century B.C. date for the Minoan Santorini eruption and late Late Minoan IA obviously impossible. A high date for Khyan as suggested by the archaeological evidence at Tell Edfu, Tell el-Dab^ʿa and the scientific dating evidence for Tell el-Dab^ʿa would deliver a late 18th century B.C. *terminus post quem* for the end of Middle Minoan III and allow a late 17th century B.C. late Late Minoan IA eruption without any contradiction (see fig. 7).

To conclude this somewhat lengthy treatment of mid-2nd millennium B.C. Eastern Mediterranean chronology: The reassessment of Khyan's place in the sequence of Second Intermediate Period rulers based on the occurrence of his seal impressions together with kings of the 13th Dynasty in Tell el-Dab^ʿa and Tell Edfu and the radiocarbon sequence for Tell el-Dab^ʿa solves the last (archaeological) problem of the High radiocarbon-based chronology for the Aegean Bronze Age. The new high date for Khyan, contemporary with the late 13th Dynasty is corroborated by radiocarbon data from Tell el-Dab^ʿa and Tell Edfu and makes the Middle Minoan III context of the Khyan-lid at Knossos a valid *terminus post quem* for the start of the Late Bronze Age in the Aegean basin and thus for the Minoan Santorini eruption, dateable to the late 17th century B.C.

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¹⁶⁸ Höflmayer 2012a, 172–175.

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Nadine Moeller – Gregory Marouard

The Context of the Khyan Sealings from Tell Edfu and Further Implications for the Second Intermediate Period in Upper Egypt¹

The recent discovery of 41 clay sealings showing the cartouche of the Hyksos ruler Khyan at Tell Edfu has opened up a new discussion on the chronology and history of the Second Intermediate Period. This is the first time that such a considerable number of Khyan sealings, which were excavated in a secure archaeological context, have been found in Upper Egypt. This find not only implies economic or diplomatic contacts between the north and the capital of the second Upper Egyptian nome in the south, but also provides a new piece of evidence concerning the beginnings of Second Intermediate Period in Upper Egypt. The archaeological context has been published in several preliminary reports and in a more detailed article in 2011². Therefore, the outline in the current publication will focus mainly on the essential points that are most relevant for this discovery.

The aim of this paper is to focus on several issues that have been brought up repeatedly in discussion during the workshop held in Vienna, and which the authors wish to address here in more depth. One is the precise context of the Edfu sealings and the comparison to those found at Tell el-Dab^ca in areas F/II and R/III. It was agreed upon by the participants of the workshop that the sealings from Tell Edfu have the advantage of coming from a sealed archaeological context, which provides a good basis for further research. Another topic that was object of debate is the hypothesis voiced by Daphna Ben-Tor and others about the widespread re-use of late Middle Kingdom scarab seals during the Second Intermediate Period once the central government had broken down and the royal residence moved to Thebes. This raises some points about the developments and changes in the administrative system in the transitional period from the late Middle Kingdom into the Second Intermediate Period. Furthermore, the evidence for royal scarab workshops and the modes of distribution of seals to officials, which includes the question about the abandonment of Itj-Tawy and the consequences for the administrative system of the country, will be addressed.

The archaeological context of the sealings at Tell Edfu

During the 2010–2011 field seasons the archaeological fieldwork concentrated in the zone 1 at Tell Edfu, which is located to the eastern side of the tell, close to the Ptolemaic temple (fig. 1). Between 2005 and 2011, the main objective in this area had been the excavation of a large administrative building complex, which dates, according to the ceramic evidence, to the second half of

¹ The 2011 and 2012 seasons at Tell Edfu that led to the discovery of the discussed sealings were largely supported by a collaborative grant from the National Endowments for the Humanities (NEH) for which the authors are very grateful. A big thank you also goes to Kathryn Bandy who read a first draft and provided valuable feedback. Last but not least the authors would like to thank the Oriental Institute, directed by Gil Stein, for the ongoing support of this project and for making this workshop in Vienna possible.

² See Moeller 2011, 111–120; Moeller 2010, 81–111; Moeller 2009, 117–125 and Moeller 2008, 118–123 and in more detail Moeller et al. 2011.

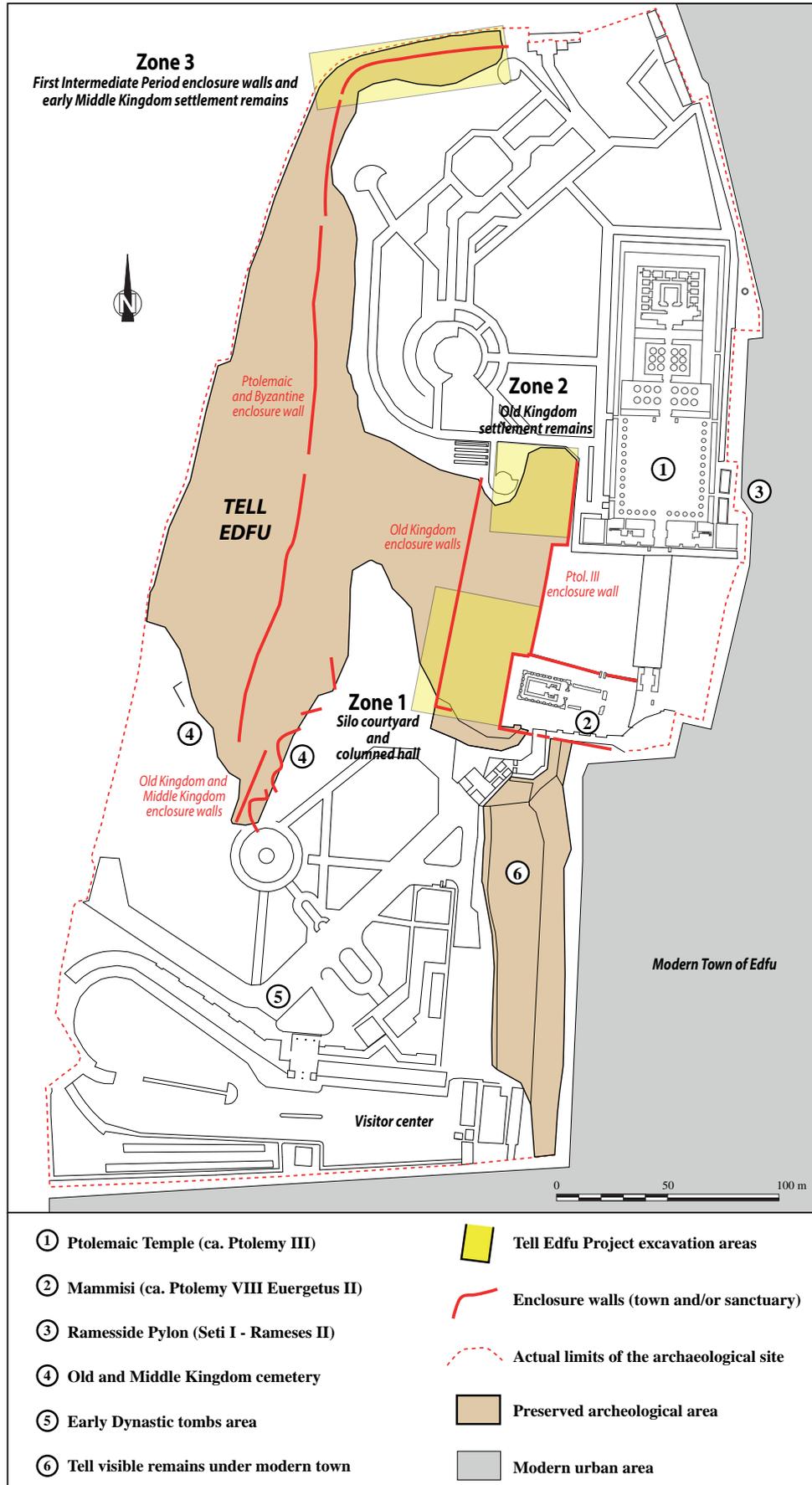


Fig. 1 General plan of Edfu showing Tell Edfu Project excavation areas (Plan G. Marouard, TEP©)

Middle Kingdom (12th–13th Dynasties). The southern and western limits of this complex revealed the presence of two large columned halls of which the southern one was fronted to the western side by a smaller elongated room (fig. 2)³. Extending the excavation area to north is one of the possibilities which is planned for the future seasons at Tell Edfu, however any further excavation on the eastern side of the administrative building is restricted due to the later Ptolemaic temple enclosure walls, which limits the tell to the east.

The origins of this complex date back to the early 12th Dynasty and evidence for administrative activities in this area can be traced back to the late First Intermediate Period and early Middle Kingdom according to a significant amount of sealings stamped with button and small scarab seals in burnt fill layers predating the columned hall building⁴. By the end of the 13th Dynasty, the columned hall complex was abandoned and, after a relatively short interval, only localized occupation to the southern exterior of the building has been found that is marked by simple mud brick installations and numerous fireplaces⁵. At this point the roofing and the columns were completely dismantled including the removal of most of the stone column bases.

The whole area of the former columned hall complex was later re-occupied by a large silo-courtyard in the 17th Dynasty, which confirms, despite a radical change of its function, the continuation of administrative activity in this area setting it apart from domestic use and occupation. The extremely well-preserved stratigraphy and unbroken succession of occupational phases provide good evidence for the longevity of official activities in this specific part of the ancient town of Edfu.

The architectural layout of the building known so far is marked by a southern and northern columned hall. The southern one measures 12 m in north-south direction and its interior was made up of at least 16 columns as can be confirmed by five round sandstone column bases found *in situ* in the mud-floor of this hall. A further eleven columns can be reconstructed according to the negatives of round holes that were created when some of these bases were removed for reuse after its abandonment. On the eastern side of the southern columned hall, a smaller room of rectangular layout has been excavated measuring 2.3 × 11.5 m, which gives it an elongated appearance. This room was accessible through a small doorway connecting it to the columned hall, which in the archaeological record has been identified by the remains of two thin mud brick walls that originally flanked this doorway. In the immediate vicinity a concentration of peg sealings was discovered on the last level of floor occupation, which further confirms the presence of this doorway from the columned hall leading into the elongated room which seems to have been an important component of the complex being officially closed and sealed on a regular basis (figs. 2, 3).

On the northern side of the southern columned hall lies another hall, which also had once been equipped with columns. This adjoining northern columned hall was accessed via a doorway on the northern side of the southern columned hall and the negative of a dismantled stone threshold is indicated by the rough and broken patch in the otherwise well-preserved mud-brick floor (fig. 2). Also partially under the later silo (Si 316), four round holes were discovered that stem from the removal of column bases from the floor (fig. 4). A fill of clean yellow sand has been noted in two of them, which was used to stabilize the weight of the heavy column⁶. According to the diameter of these holes, it was observed that the column bases had been of a larger diameter than those found in the southern columned hall⁷. It is therefore quite plausible that the northern columned

³ This kind of layout has parallels elsewhere, elongated rooms, lying next to larger halls, see the 'Command Building' at Buhen, Emery et al. 1979, pl. 16. Another example can be seen at the palace of Uronarti; see Dunham 1967, map 4. A detailed study of this architectural phenomenon is currently being prepared by N. Moeller.

⁴ Moeller 2009, 110–112 figs. 8–10.

⁵ Moeller 2011, 113 fig. 5.

⁶ Moeller 2011, figs. 8, 9.

⁷ The two holes (Ho 724 and Ho 725) have a diameter between 1.25 m and 1.44 m and the inter-column space is 2.4 m (minimum). In comparison, the column bases of the southern columned hall measure 0.76 m in diameter and the inter-column space is 2.19 m.

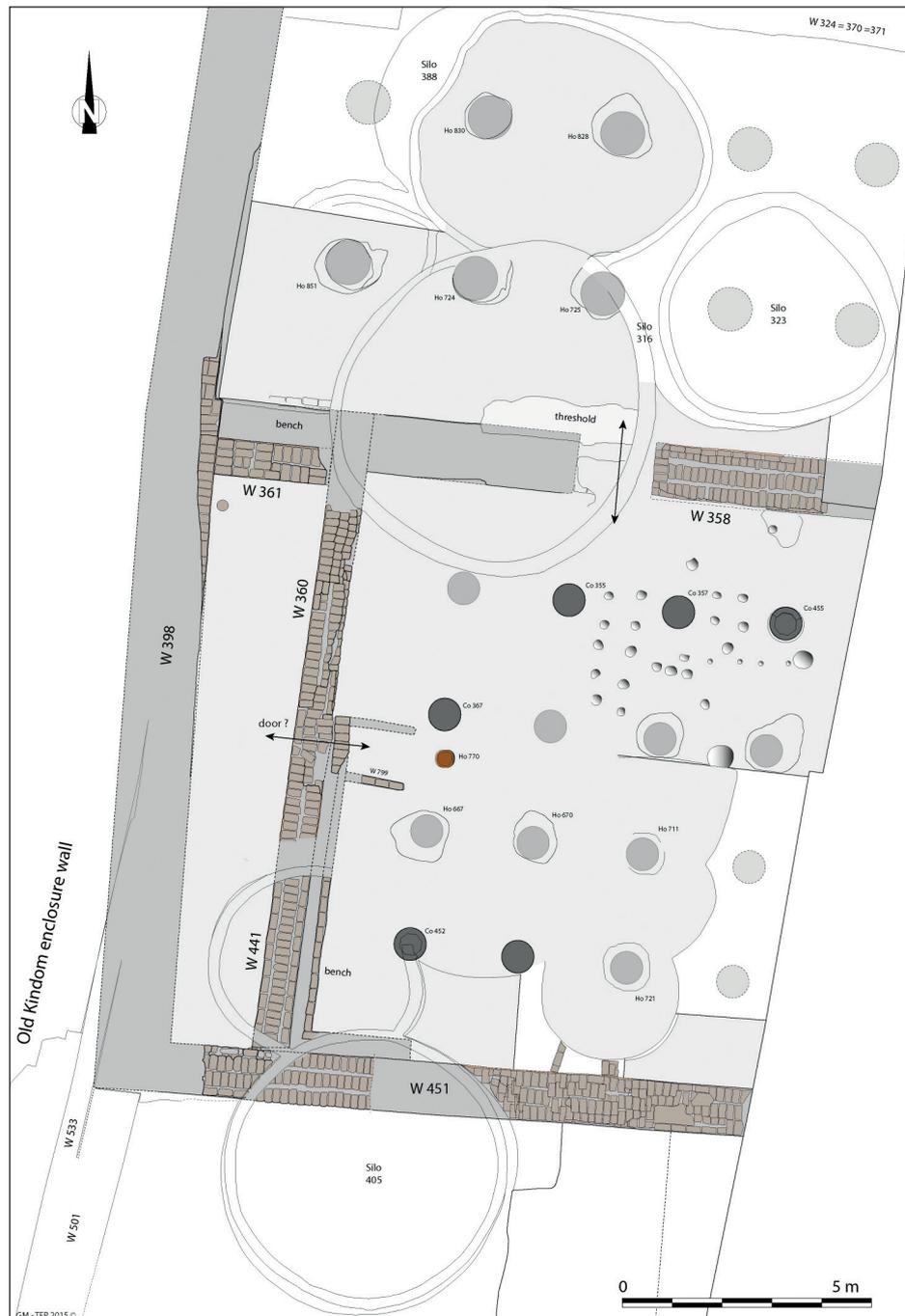


Fig. 2 Plan of the Middle Kingdom southern and northern columned halls at zone 1 (Plan G. Marouard, TEP©)

hall functioned as the central and most important space within the building complex, which can also be inferred from its more central location in comparison to the southern hall that marks the southern limit of the building (fig. 2). Architectural parallels to the structure at Edfu are difficult to find in the current archaeological record, particularly in settlement context, and it is interesting to note that layout is neither comparable to the large mayor's residence at Wah-Sut at Abydos nor the mansions at Lahun, which date to the same period and have functioned not only as residences, but also administrative buildings⁸. Comparative material should be expected from the Middle Kingdom town at Elephantine in the First Cataract region, but the mud brick remains identified

⁸ See Wegner 2001, 289 fig. 5.

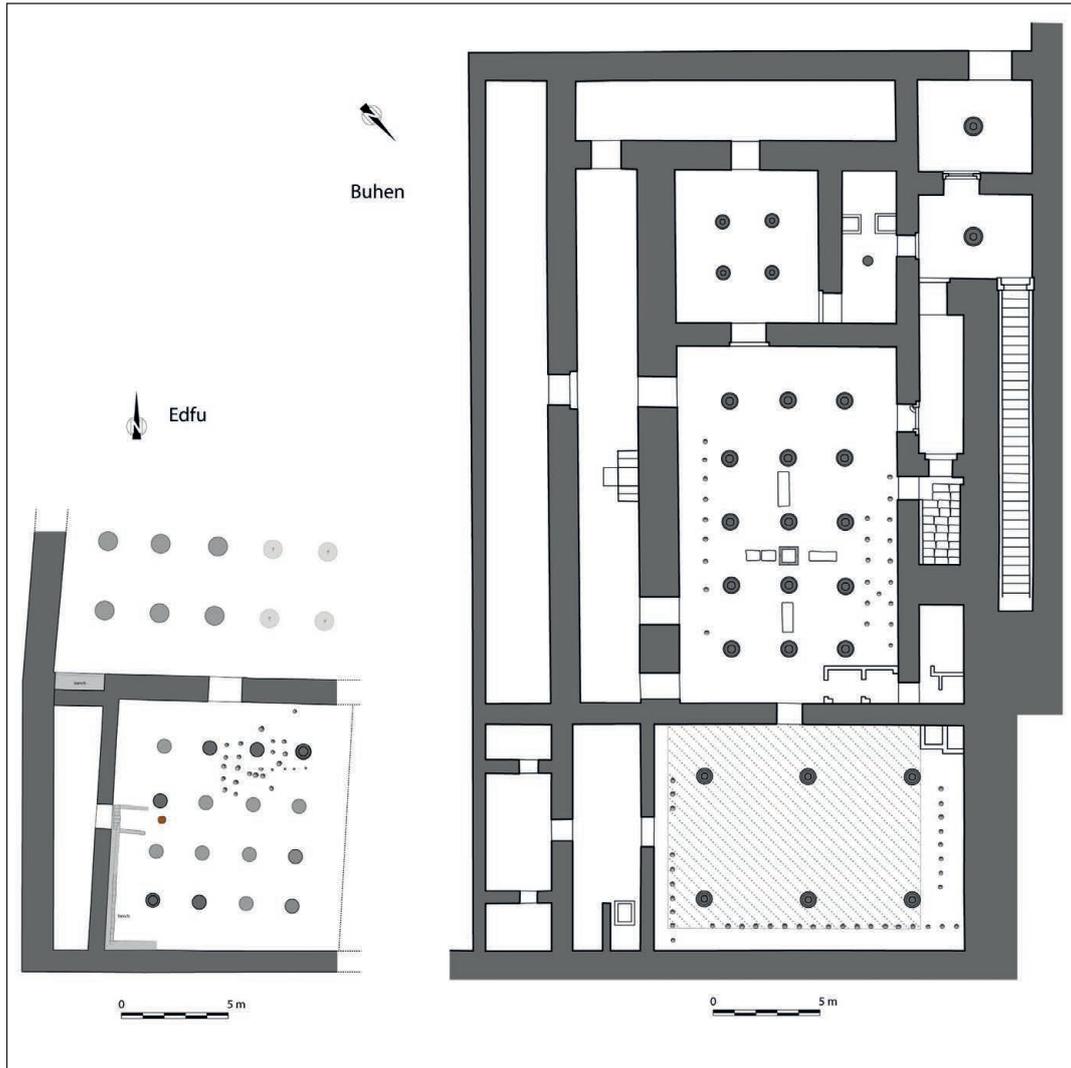


Fig. 3 Comparison between Edfu columned-hall complex and Command Building at Buhen (Plan G. Marouard, TEP©)

as the mayor's residence are only preserved along one of the sides, including the main entrance while most of the interior has been destroyed by *sebakh* digging⁹. There is also little data from the city of Thebes where several columned halls have been excavated east of the sacred lake at Karnak, but the publications present only a preliminary plan without a detailed presentation of the archaeological evidence with regard to the layout of these structures and the various phases of occupation¹⁰. The best parallel for the architectural layout of the columned hall building at Edfu is the so-called Command Building at the Middle Kingdom fortress of Buhen, where a complex with a central columned hall has been found (fig. 3)¹¹. The latter measures about 17 m by 10 m and was once equipped with 15 columns of which only the bases remain. In the center of this hall, a stone water basin was located. Four stone slabs were laid on the mud floor in the four cardinal

⁹ The excavated remains of H2 (identified as governor's residence), however, confirmed its long-term use from the First Intermediate Period until the end of the Middle Kingdom. The excavations around the entrance area of H2 revealed the presence of an older, 6th Dynasty building underneath the First Intermediate Period walls, see von Pilgrim 2006, 403–405.

¹⁰ Lauffray et al. 1975, 27–29 fig. 13 pl. 11 A; Lauffray 1980, 44–46 fig. 16; Lauffray 1995, figs. 1. 2 pl. 8 b. For a general overview of these structures, see Moeller 2016, 300–305.

¹¹ Emery et al. 1979, pl. 16

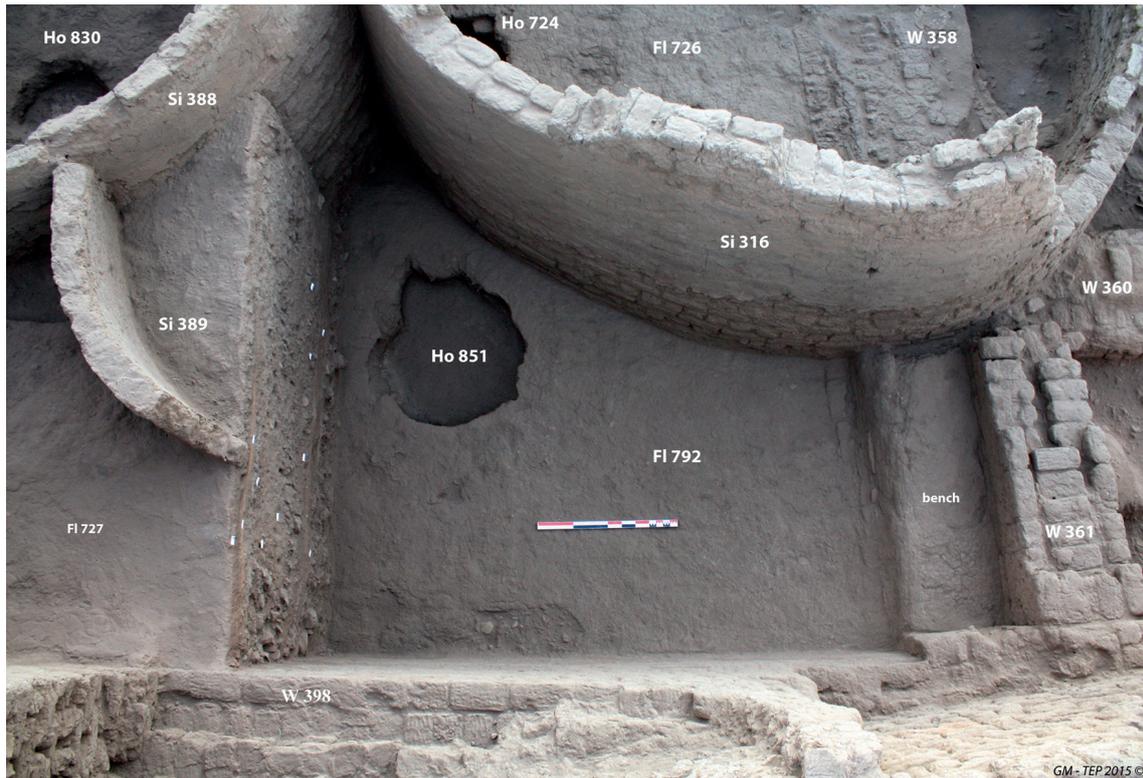


Fig. 4 Photo of Khyan sealing find spot in northern columned hall (Photo G. Marouard, TEP©)

directions. Along the walls of the hall numerous shallow holes were recorded by the excavators, which served as emplacements for large round-based storage jars made of marl clay. Similar holes have also been noted in one of the floor phases of the southern columned hall at Edfu.

The northern and southern columned halls of the administrative complex at Tell Edfu show an almost identical stratigraphic sequence, including its occupation and use until the final abandonment, which indicates that these sequences are synchronous¹². Both the southern and the northern columned hall are marked by a thick mud floor, which had been renewed on multiple occasions. The southern columned hall floor has a sequence of at least thirty sub layers confirming the long use and regular floor renewal and upkeep¹³. The largest number of discarded clay sealings was excavated in the layer directly on top of the last floor level which corresponds to the final phase of occupation. Both in the northern and southern columned halls this layer was identified during the excavations (US 2682 [fig. 5], and US 2079). On the surface of the last floor level of the latter, which had already encroached upon the column bases, a rich assemblage of objects was found¹⁴. This layer (US 2079) has a thickness of only 5 to 10 cm and consists of a loose silt matrix with a heavy proportion of organic micro-particles, specifically pieces of fine straw with the occasional addition of ash and small accumulations of charcoal similar to what can be found in the remains of several small fireplaces on the surface of these mudfloors. US 2079 was particularly abundant in pottery sherds, clay sealings and other items (including faunal remains, ceramic weights, clay figurines, etc.) and has been excavated over a total area of more than 125 m² which comprises the

¹² Moeller et al. 2011, 94–95 figs. 5. 6.

¹³ An important question to ask with regard to the thick built-up of floor phases, which are a couple of centimeters thick, is how often was such a floor renewed and how much time should be ascribed to each phase, i.e. a couple of months? Currently there is no comprehensive study on the formation of mud floors for Egypt. Ethnographic data might be a helpful source to explore in the future.

¹⁴ See Moeller et al. 2011, 98 figs. 8. 9.

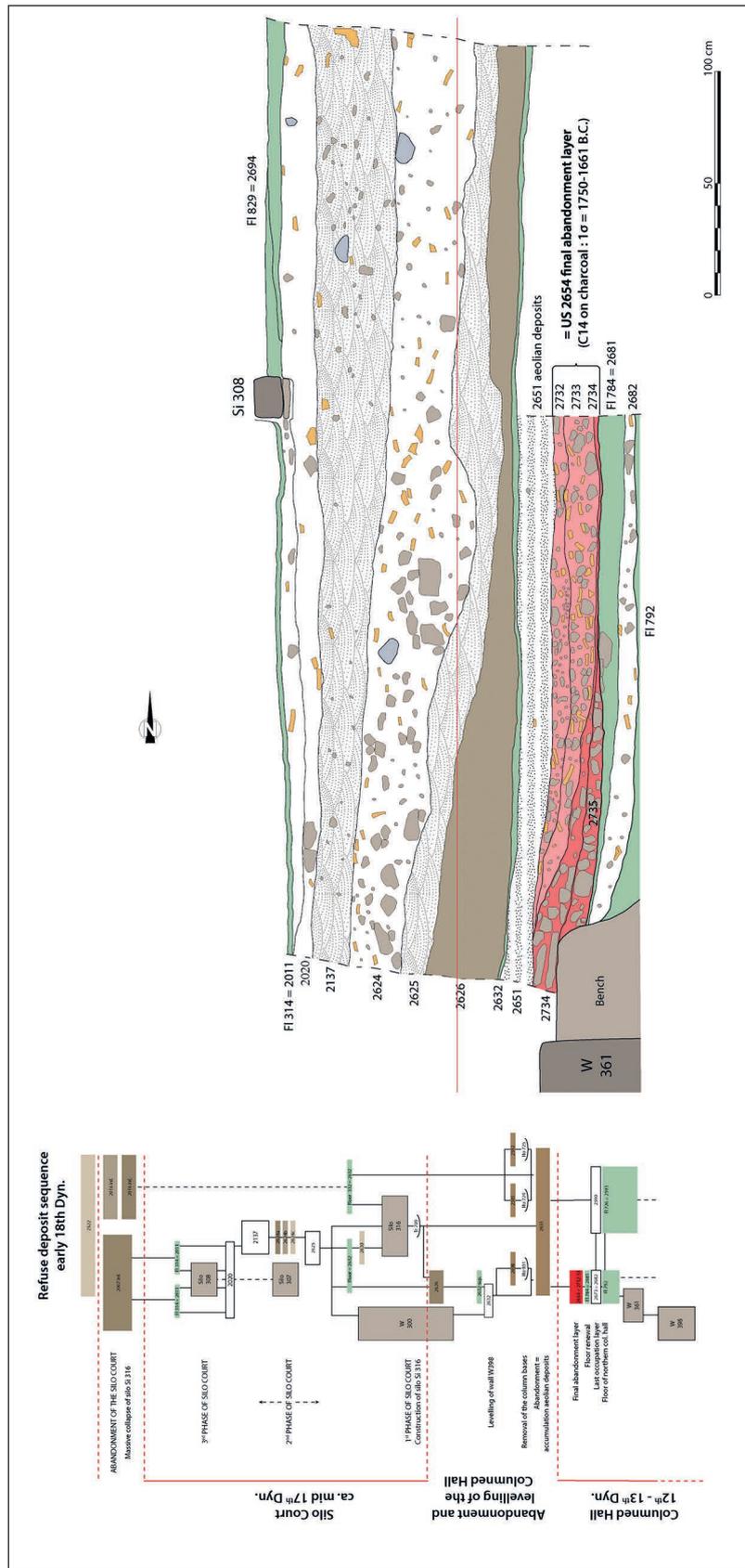


Fig. 5 West profile drawing showing the final abandonment layers 2654 = 2734–2735, in red (Drawing G. Marouard, TEPC)

largest exposure of this level in the whole building complex¹⁵. In relation to the gradual demise of this building, the otherwise attested upkeep and cleaning was not carried out, leaving traces of the activities which had been conducted in this large space. These objects are good evidence for the multi-purpose function of such spaces and provide some additional information about possible activity areas. In the two columned halls, these final occupation layers were sealed in both cases by a deposit of Aeolian sand, which can be clearly recognized in the stratigraphy (for the northern columned hall, see US 2651 on fig. 5)¹⁶. This layer was almost sterile with very few objects most likely coming from the final occupation below. At that time, the main structure itself remained relatively intact with the columns still *in situ*. The next phase recognizable in the stratigraphy is characterized by the almost systematic removal of the column bases and the dismantlement of the exterior western wall W 398 (fig. 5); this marks the partial disappearance of this building within the settlement¹⁷. Thereafter, a long stratigraphic sequence accumulates, which is characterized by several phases of inactivity during which thick layers of windblown sand and fill layers with refuse and leftovers from large scale leveling operations were deposited prior to the construction of the silos dating the late Second Intermediate Period. In the 17th Dynasty, the entire zone was transformed into a vast silo courtyard whose construction necessitated further dismantling of older walls¹⁸. Characterized by three to four consecutive phases of construction and renovation, these silos of exceptionally large size functioned as the principal grain storage facility for the town of Edfu during the entire 17th until the early 18th Dynasty. The date for the life-time of the silos has been confirmed by the ceramic material found in the layers linked directly to their use and also by pottery found on the exterior floor levels that were continuously growing in height over time¹⁹. By the early 18th Dynasty, several of the silos had collapsed, especially their dome-shaped upper part which was most vulnerable, and the whole area became a zone for refuse deposit on a large scale; this can be seen in the very thick layers of ash and other accumulations of waste²⁰. These enormous deposits, none of which date later than the mid-18th Dynasty, are probably evidence for the presence of a large urban production facility nearby that included a bakery, storage installations, and metal working²¹; a refuse deposit of domestic origin can be excluded.

Further details concerning the archaeological context of the Khyan sealing

The late Middle Kingdom administrative building has led to the discovery of more than a thousand clay sealings which can be associated with the use and abandonment of this building complex²². They were found in different areas of concentration inside the northern and southern columned halls. The most ubiquitous occurrence of broken clay sealings was noted in the final phase of occupation and abandonment layers in the southern and northern columned hall (US 2079, 2682 and 2590, see fig. 5 for the latter two contexts). The largest number of sealings from these contexts

¹⁵ The floor levels, including the final phase of occupation of the northern hall, were partially destroyed due to the construction of the later silos (Si 316 and 388), some of which were founded directly on the mud floor of the northern columned hall, cf. fig. 2.

¹⁶ US 2078 for the southern columned hall, see Moeller et al. 2011, 94 fig. 5.

¹⁷ It is interesting to note that no traces of the roofing were found anywhere in the Aeolian deposit which accumulated due to inactivity in this hall. It is very likely that the roof of the columned hall was still relatively intact until the final removal of the columns and the column bases.

¹⁸ The careful dismantling of the mud-bricks belonging to the western wall (W 451) of the columned hall is remarkable and was only carried out for the portion that would lie beneath the silo; see fig. 4.

¹⁹ See Moeller 2010, 89–100, for further details on the silo court and N. Ayers, this volume on the pottery.

²⁰ Moeller 2010, 87–88 fig. 4.

²¹ Several crucibles for copper smelting have been found in these fill layers, which suggests that some metal working was carried out somewhere in the vicinity.

²² Moeller et al. 2011, 91.

shows the typical late Middle Kingdom decorative motifs and, in smaller numbers, personal name sealings and the occasional fragment of a square institutional stamp seal has been found as well²³.

A group of about 40 clay sealings naming the Hyksos ruler Khyan were found in the final abandonment layer (US 2654, see fig. 5). Most of them were excavated in connection with a mud brick bench that is situated in the southwestern corner of the northern columned hall and that had been built directly against the east-west dividing wall, W 361, which separates the columned halls (fig. 4). A particular concentration of sealings including fragments of sealing clay has been found in the layer covering this bench (US 2654)²⁴. This context had been sealed by the Aeolian deposit (US 2651) marking the abandonment of the structure, similar to the one already noted in the southern hall complex. Below the layer with the Khyan sealings a mud floor marking the final floor renewal (Fl. 784) can be followed north of the bench, which is also physically linked to the lower part of the bench (fig. 5). This floor renewal is separated by a thin layer of occupation debris (US 2682), which lies directly on the floor level of the northern columned hall that originally abuts and covers the mud brick bench (Fl. 792, see fig. 5). This stratigraphy indicates that the northern columned hall might have remained in use slightly longer than the southern columned hall, where a comparable phase of floor renewal has not been found²⁵. The ceramic evidence²⁶ in addition to the presence of sealings showing motifs, which are typical for the Second Intermediate Period confirm this interpretation²⁷.

Other sealings found in the same context as the Khyan sealings

As of 2011, a total of 335 sealings have been excavated in the small space exposed between the mud brick bench, the western wall of the northern columned hall (W 398) and silo Si 316, which measures less than 20 m² (fig. 4). Such a remarkable concentration of sealing fragments attests further to this specific space of the northern columned hall being used for the opening and possibly sealing of commodities. Numerous pieces (more than 90) of sealing clay without any impressions were found here which is good proof for an active sealing practice that not only involved the opening of commodities, but also the closing of various containers, possibly as part of trade, exchange, redistribution and repackaging.

Furthermore, it can be observed that there is a particular group of sealings with motifs that occur multiple times and only very few sealings with motifs that occur once (see tab. 1).

²³ For the complete typology of late Middle Kingdom sealing motifs, see Ben-Tor 2007, 10–41 pls. 1–29. The complete corpus of Edfu clay sealings is currently in preparation for publication by N. Moeller and K. Bandy.

²⁴ In 2011, this layer, which is between 5 and 20 cm thick, was further excavated towards the north. It consists of four sub-layers (US 2732–35) which contain the same ceramic repertoire and clay sealings, mainly in the lowermost part, suggesting that these sub-layers were deposited almost simultaneously and they can be summarized under one context number, US 2654. They constitute the final abandonment phase of the northern columned hall.

²⁵ Another possible explanation for the separation of this floor renewal phase from the underlying mud floor by a thin layer of occupation debris is that since this is a marginal area of the hall, the accumulated trash was not completely cleared out before a new floor renewal phase was added on top.

²⁶ See N. Ayers, this volume.

²⁷ For a detailed analysis of the ceramic evidence which has led to the identification of early Second Intermediate Period pottery in Upper Egypt, see Ayers 2016, 1–19.

Table 1 Identified sealings occurring more than two times in US 2654

Fig.	Motif ²⁸	Type of sealing	Date (after Ben-Tor 2008)	Total no. of sealings in US 2654	BACKTYPES		
					Bag	Box or door peg	Basket
6	Cartouche of Khyan	Royal name	early 15 th Dynasty	40	×	×	×
7	Cartouche of Sobekhotep IV	Royal name	mid-13 th Dynasty	6	×	×	
8	Noble women, king's daughter, Ren(i)-Seneb (<i>íry.t -p^ct s3.t- ny-sw.t Rn(i)-snb</i>)	Personal name	mid-13 th Dynasty	4	×	×	
9	Sealbearer of the king, high steward, follower of the king, Redienptah (<i>h̄tm.ty-bi-ty imy-r3 pr-wr šmsw- ny-sw.t Rdí-n-Pth</i>) ²⁹	Personal name	mid-13 th Dynasty	12		×	
10	Overseer of the army / general, Hori, justified (<i>imj-r3 mš^c Hri m3^c-hrw</i>)	Personal name	Late MK	6		×	×
11	Keeper of the Broad Hall ³⁰ , Isi, possessor of Imakhu (<i>Íry wsh.t Íz̄t, nb Ím3h.w</i>)	Personal name	Late MK	21		×	
12	Lady of the House, Neferu, repeating life (<i>nb.t-pr Nfrw whm.t cⁿh</i>)	Personal name	Late MK	8		×	
13	Doorkeeper, Usernebu (<i>íry- c3 Wsr-nbw</i>)	Personal name	Late MK	25	×	×	×
14	Male figure holding a lotus flower	Design class 10A ³¹	SIP, Late Palestinian series	83	×	×	×
15	Scarab motif within double twisted rope border	Design class 8A ³²	SIP, Late Palestinian series	46		×	

As far the seals of Hyksos kings are concerned, there seem to be two distinct variants. One, which is the variant of the Edfu examples belong to, shows the royal name written according to the traditional Egyptian royal names and titles. The second version, not found at Edfu, has no cartouche and the name of the Hyksos king is followed after the title of *h̄q3 h̄3s.wt* – »Ruler of the foreign lands«. In this case the seals also are lacking the spiral border and have a simple division of two parallel lines creating three small columns with the king's name in the center and the space on each side is filled in with *nefer* and *ankh* signs³³. Both variants occur with the *prenomen* and *nomen* of the Hyksos ruler. Almost all examples of the Khyan sealings found at Tell Edfu show identical features with the name of the king written in a cartouche being surrounded by oblong

²⁸ For more details, see the analysis of most of these sealings in Moeller et al. 2011, 110–111.

²⁹ For parallels, see Martin 1971, 72 no. 895 pl. 24 nos. 21–24.

³⁰ This is a relatively rare Middle Kingdom title, see Hannig 2006, I, 338. For the meaning of *wsh.t* as broad hall in administrative buildings, see WB I, 366 and Hannig 2006, I, 736. For other titles including the term *wsh.t* in the Middle Kingdom, see Ward 1982, 21 no. 127 *imy-r3 wsh.t* »overseer of the broad hall«, 116 no. 973 *hry - wsh.t* »master of the broad hall«.

³¹ Ben-Tor 2007, pl. 102. Ben-Tor has assigned this motif to the late Palestinian series, which dates to the Second Intermediate Period.

³² For parallels, see Ben-Tor 2007, pl. 40 nos. 14. 18–23. Ben-Tor dates those scarabs to the Second Intermediate Period.

³³ Ben-Tor 2007, pl. 43 nos. 2 and 4.

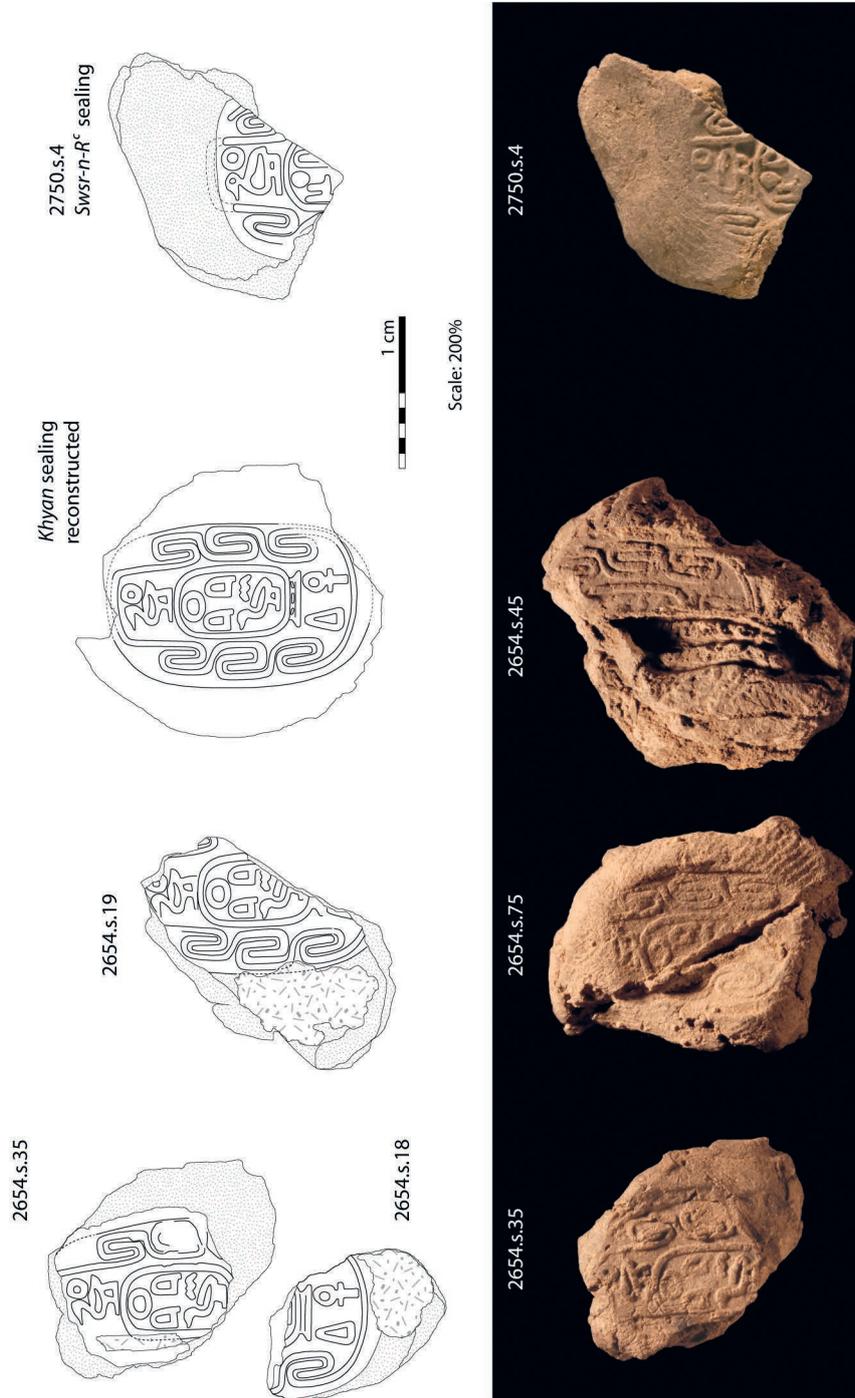


Fig. 6 Khyan sealings from layers 2654 and 2750 (Photos J. Schmied, drawings G. Marouard, TEP©)

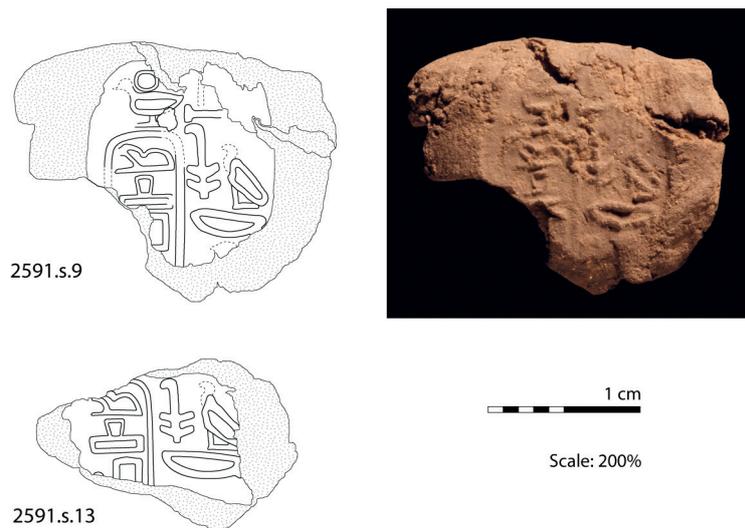


Fig. 7 Sobekhotep IV sealings from the northern columned hall (Photos J. Schmied, drawings G. Marouard, TEP©)

spirals (fig. 6). Above the cartouche one can read the royal title of *s3-R^c*, »Son of Ra«³⁴. The sealings found in context US 2654 were all impressed by the same seal, which further confirms that they were part of the same shipment of goods to Edfu. Two additional examples of clay sealings with the name of Khyan, but from different contexts within the columned hall complex, have also been found. However, these were not impressed by the same scarab. One of them was found on the occupation debris (US 2590) directly on top of floor 726 = 729 underneath silo Si 316, which is the main floor level of the northern columned hall. The slight difference in the shape of the hieroglyphs and their spacing on the sealing are clearly recognizable and suggests that a different scarab seal was used for this impression. A second sealing associated with Khyan but this time showing his nomen *Swsr-n-R^c* (see 2750.s.4 in fig. 6) comes from a secondary fill layer (US 2750). However, the existence of these two variants clearly indicates that there was more than one shipment from the city of Avaris to Edfu that can be associated with the reign of Khyan. No example mentioning the title *hq3 h3s.wt* has been found at Edfu so far, but those versions seem to occur frequently at Tell Dab^ca (see below). As the situation stands now, it is not possible to recognize a distinct pattern in the distribution of these two kinds of motifs and there does not seem to be a temporal connection. It is, however, possible that the use of the typical Egyptian title »Son of Ra« and the cartouche were favored for goods being sent further south into Upper Egypt. This is certainly a line of inquiry that should be investigated further.

Together with the Hyksos sealings of clearly northern origin, another type of royal name sealing has been found, in this case it belongs to the late Middle Kingdom Egyptian tradition. It shows the cartouche of a king Sobekhotep and next to it his maternal filiation, naming his mother Kemi, which identifies him as Sobekhotep IV (fig. 7)³⁵. Sobekhotep IV is firmly placed in the mid-13th Dynasty by the entry in pTurin 7/27³⁶. He is one of the best-attested kings of this period and ruled for at least nine years³⁷. The Sobekhotep group of rulers (Sobekhotep III, Neferhotep I, Sobekhotep IV) marks an important period of political stability within the 13th Dynasty. All of them are attested by numerous monuments, stelae and scarabs in northern and southern Egypt, as

³⁴ Ben-Tor 2007, pl. 43 nos. 5–8.

³⁵ Ryholt 1997, 231; Ben-Tor 2007, pl. 21 nos. 3. 6–7. Also at Edfu, one example with the cartouche of Sobekhotep IV and his paternal filiation has been found at the opposite side of the administrative building complex in a secondary context (US 2648).

³⁶ Ryholt 1997, 37 tab. 9.

³⁷ The highest attested regnal year for this ruler is year 9, on a stela from the Wadi Hammamat; see Ryholt 1997, 229–231.

well as in Nubia and as far as Byblos³⁸. Detlef Franke attributed these kings to the second phase of the 13th Dynasty in his four-part division of the late Middle Kingdom and notes the increase in royal monuments and stelae at this time³⁹. This indicates a politically stable and overall prosperous time.

With Sobekhotep III, a new type of royal name scarab that mentions the maternal and paternal filiations of these kings is introduced⁴⁰. It is evident that these kings were not of royal descent, which they seem to have actively promoted through the distribution of these scarabs. In addition, there is evidence that this group of kings originated from Thebes, which Sobekhotep IV explicitly mentions in a stela dedicated to Amun (Cairo JE 51911)⁴¹. Furthermore, Sobekhotep III, Neferhotep I and Sobekhotep IV have multiple attestations at Karnak temple emphasizing their veneration of Amun. However, this does not necessarily mean that the royal residence was situated in Thebes at this time, but it could be a sign for an Upper Egyptian origin of this family. As for their choice of burial grounds, a preference for Upper Egypt can be recognized as well. In the recent fieldwork at Abydos in the vicinity of Senwosret III's mortuary complex, two royal tombs have been found that can be assigned to at least two of them⁴². At Tell Edfu, there are attestations for both Sobekhotep III and Sobekhotep IV from inscriptions found at this site. The former's name occurs on a sandstone doorjamb, which probably came from a chapel and which is now on display in the newly constructed blockyard to the west of the temple. Its provenance is uncertain and according to Gawdat Gabra and Adel Farid, who first published this inscription, it was found during *sebakh* digging at an undisclosed location of the tell, probably in a secondary context⁴³. Sobekhotep IV is attested on a private stela, which mentions regnal year 8, and which had been put up at the much older tomb of Isi in the nearby cemetery⁴⁴. Thus, the activity of these 13th Dynasty kings at Edfu is attested by more than just the clay sealings.

Apart from the two royal name sealings, Khyan and Sobekhotep IV, which have been discussed above, there are six personal name sealings occurring multiple times in the same stratigraphic layer, which are firmly anchored in the late Middle Kingdom tradition as well (tab. 1). Among this group of private name sealings are four fragments naming the »noblewoman, King's daughter Ren(i)-seneb« (*iry.t-p^c.t sz.t - ny-sw.t Rn(i)-snb*) (fig. 8), whose name also occurs in connection with the mayor's residence at the late Middle Kingdom settlement of Wah-Sut in South-Abydos and a scarab with her name and titles has been found in El-Kab⁴⁵. Josef Wegner discovered a concentration of 59 clay sealings naming Reniseneb with identical titles in the granary complex of the mayor's residence⁴⁶. The archaeological context firmly dates these sealings to the mid-late 13th Dynasty and therefore to the post-12th Dynasty phase of occupation of the mayor's residence. Sealings with the name Reniseneb and especially in conjunction with the titles of »King's daughter« and »noblewoman« have been found at several other sites and it is evident that there was more than one King's daughter named Reniseneb in the late Middle Kingdom⁴⁷. The seal impressions from Edfu resemble closely a scarab seal purchased by Percy E. Newberry, but it came

³⁸ For the extensive collection of attestations for these kings in Egypt and abroad, see Ryholt 1997, 343–352. For the evidence of foreign relations of Neferhotep I and Sobekhotep IV, see discussion by Ryholt 1997, 85–93.

³⁹ Franke 2008, 272.

⁴⁰ Ben-Tor 2007, pl. 21; and Ryholt 1997, 297.

⁴¹ Ryholt 1997, 226: »My majesty [came] to the Southern City since I wanted to see the august god; this is my city in which I was born.«

⁴² See contribution by J. Wegner this volume.

⁴³ Gabra – Farid 1981, 182 pl. 30 b fig. 2.

⁴⁴ Alliot 1935, 33 no. 13 pls. 16 [2]; 17 [2]; Ryholt 1997, 350 no. 29. A second stela naming a regnal year 8 but without having the king's name preserved is likely to have been Sobekhotep IV, too. It was found in the same context as the former one. Their present location is unknown.

⁴⁵ Wegner 2004.

⁴⁶ Wegner 2004, 223–224 fig. 2.

⁴⁷ Wegner 2004, 228–229.

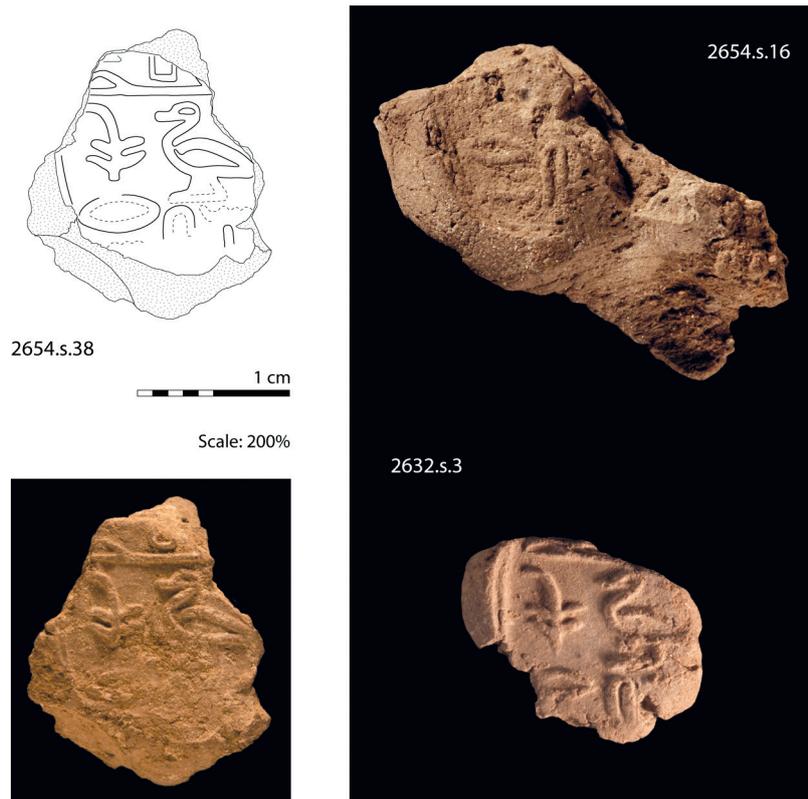


Fig. 8 Sealings of the Noble women, king's daughter, Ren(i)-Seneb from layer 2654 (Photos J. Schmied, drawings G. Marouard, TEP©)

without provenance⁴⁸. Kim Ryholt compiled a list of the occurrences of this royal daughter, which in all cases seems to be linked to the Sobekhotep group of rulers in the mid-13th Dynasty⁴⁹. This further confirms the contemporaneity of these princess sealings to those of Sobekhotep IV in the Edfu context and is another piece of evidence suggesting that the Sobekhotep IV sealings are not residual or accidental. Another clay sealing from this context which can be assigned to this period is the private name sealing mentioning the »sealbearer of the king«, »chief steward«, »follower of the king, Redientpah« (fig. 9 and tab. 1, no. 8). This official who according to his titles was in charge of administering the royal property and assets has been dated according to the back-type of his scarabs to the mid-13th Dynasty⁵⁰.

Among the remaining sealings from context US 2654 (figs. 10–13), several motifs are clearly assigned to the Second Intermediate Period. The numerous sealings showing the motif of a man holding a lotus flower (fig. 14) can be assigned to the Late Palestinian series according to the typology established by Daphna Ben-Tor⁵¹. The corresponding scarab that was used to stamp the

⁴⁸ Wegner 2004, 229 fig. 4 no. 2.

⁴⁹ Ryholt 1997, 227 no. 799. There is one attestation for the sister of Sobekhotep III called Reniseneb, but Ryholt points out that she does not carry the title King's daughter in this specific case, see Ryholt 1997, 222–223.

⁵⁰ Quirke 2004, 178–179. He demonstrates that back type 6 is typical for the mid-13th Dynasty, and the scarabs of Redientpah published by Martin mostly show these features, see also no. 25 for details. For a more general analysis of the typical features of scarabs belonging to the mid-13th Dynasty (the so-called Sobekhotep group), see Ben-Tor 2007, 39–41. She confirms Martin's back types 6 and 7 as typical for this time period. For further details on the title »chief steward« *imy-r3 pr-wr* (»Obervermögensverwalter«) during the late Middle Kingdom, see Grajetzki 2006, 112–115. A further indication confirming a mid to late 13th Dynasty date is the writing of *htm.ty-bi-ty* with the red crown sign instead of the bee, see comments by Grajetzki 2001, 36.

⁵¹ Ben-Tor 2007, 155–183, and see also her discussion in this volume. It needs to be pointed out though that none of the comparative examples shown in her corpus is of the same high quality in view of its fine carvings.

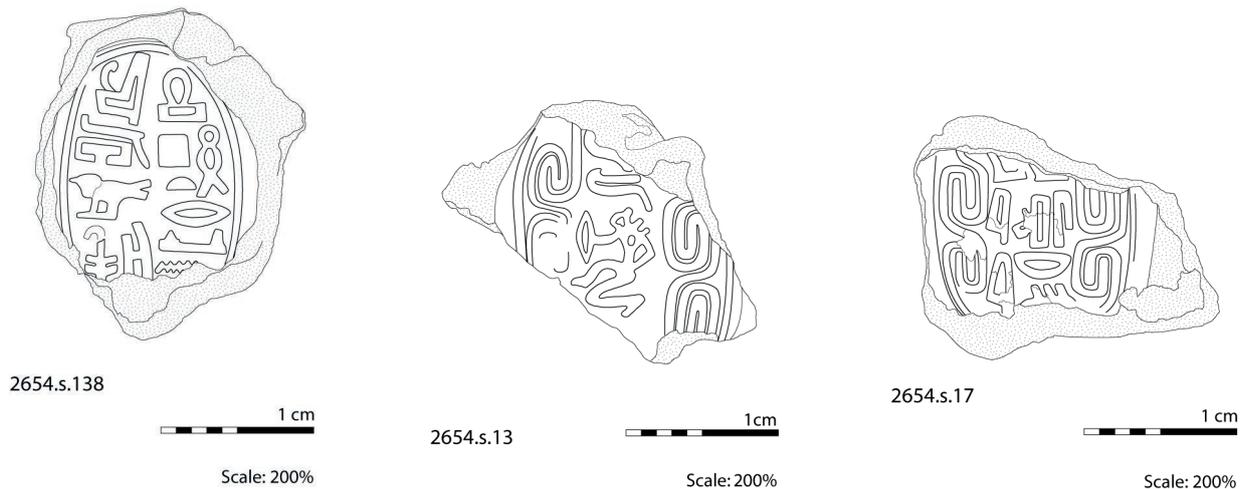


Fig. 9 Sealbearer Redientpah sealing (Photo J. Schmied, drawings G. Marouard, TEP©)



Fig. 10 Overseer of the army/general, Hori sealing (Photo J. Schmied, drawings G. Marouard, TEP©)



Fig. 11 Keeper of the Broad Hall, Isi sealing (Photo J. Schmied, drawings G. Marouard, TEP©)

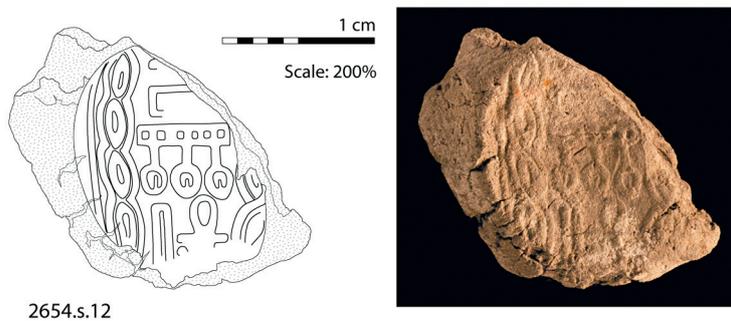


Fig. 12 Lady of the House, Neferu sealing (Photo J. Schmied, drawings G. Marouard, TEP©)

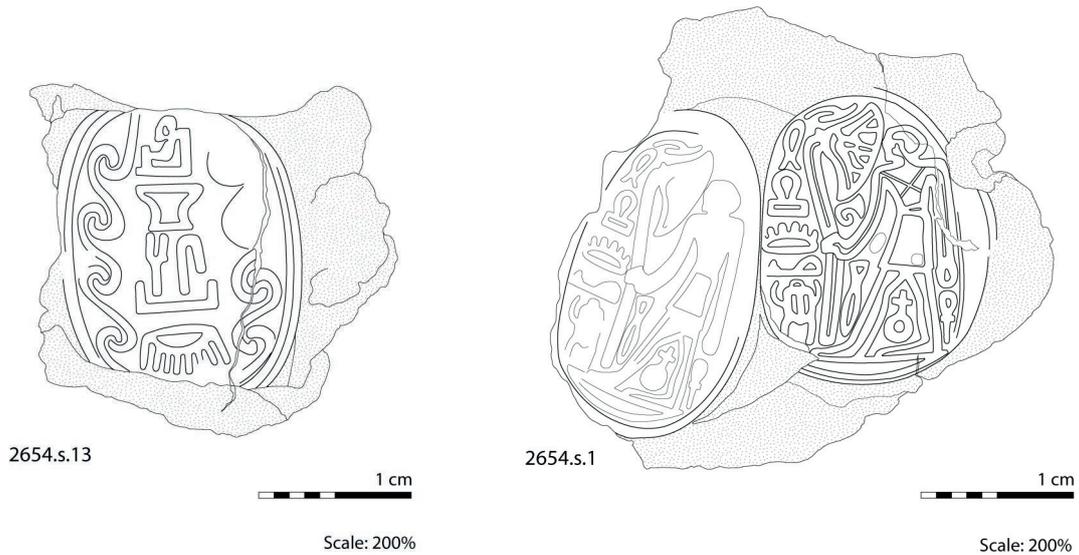


Fig. 13 Doorkeeper Usernebu sealing (Photo J. Schmied, drawings G. Marouard, TEP©)



Fig. 14 Sealings with a man holding a lotus flower (Photo J. Schmied, drawings G. Marouard, TEP©)

mud-seals was clearly manufactured in the Palestinian region. It displays characteristics typical of the Late Palestinian corpus. Examples of this motif were also found at Tell el-Dab^a, where they were assigned by Christa Mlinar to type IV and dated to the early 15th Dynasty⁵². Another motif that can be dated to the Second Intermediate Period and which also occurs frequently (46 times) within US 2654 shows a large scarab beetle with the sun disc between his front legs (fig. 15). It has parallels in Ben-Tor's category of Egyptian scarabs dating to the Second Intermediate Period⁵³. Only three sealings showing a different decorative motif each and occurring only once in context US 2654 can be noted, which also underlines the high homogeneity of this context. Two of them belong to the late Middle Kingdom series and one simple *anra* type decoration on a single

⁵² Mlinar 2004, 122–129. See also the more detailed analysis of this motif in Appendix I, 2654.s.1. For further details concerning the analysis of this motif dating to the Late Palestinian series by D. Ben-Tor, see Moeller et al. 2011, 103.

⁵³ Ben-Tor 2007, pl. 40 nos. 14–23.

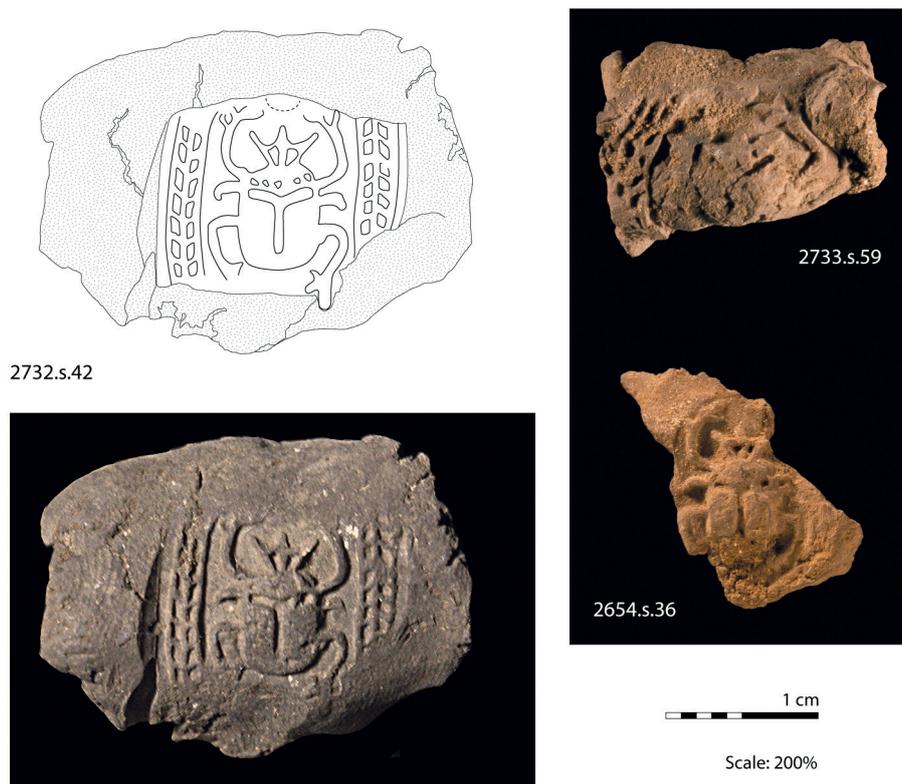


Fig. 15 Sealings with scarab motif within double twisted rope border (Photo J. Schmied, drawings G. Marouard, TEP©)

sealing that also belongs to the Egyptian scarab types of the Late Palestinian series⁵⁴. When taking into account the entire corpus found within in the same context together with the Khyan sealings it is evident that there substantial amount of goods arrived at Edfu from the north of Egypt which can be demonstrated by the relatively large number of clay sealings showing motifs of the Second Intermediate Period and Palestinian series; Khyan (40 pieces), the man holding a lotus flower (83 pieces) and the scarab (46 pieces) (see tab. 1).

Discussion concerning the occurrence of sealings assigned to the late Middle Kingdom and Second Intermediate Period in the same archaeological context

Daphna Ben-Tor (this volume) interprets this mix of different styles and traditions found in a single archaeological context in view of a possible large scale re-use of late Middle Kingdom personal name seals in the Second Intermediate Period, when the central government had broken down and the administrative system had collapsed including the halt of production of scarab seals in the royal workshops. The relatively long reign of king Merneferia-Ay, which lasted 24 years, has been seen as the turning point in the history of the 13th Dynasty. Detlef Franke points out the marked decreased in royal monuments during his reign⁵⁵. This king was buried in a pyramid in the Memphite region. His pyramidion was discovered in a secondary context at Qantir (Khatana), but originally came from Memphis⁵⁶. Nevertheless, the archaeological and textual evidence for the succeeding kings strongly indicates that Itj-Tawy was not yet abandoned since we hear about

⁵⁴ It compares well to the example shown in Ben-Tor 2007, pl. 84 no. 26.

⁵⁵ Franke 2008.

⁵⁶ Habachi 1952, 471–479.

the journey to this royal residence on the stela of the official Horemkhauef who has recently been dated to the reign of Nebiriaw I, a king who reigned after Merneferra Ay⁵⁷. Another important discussion in this respect is the possibility of an emerging 16th Dynasty ruling from Thebes and overlapping with the latter part of the 13th Dynasty⁵⁸.

While the reuse of older scarabs during the Second Intermediate Period is a possibility that is difficult to argue against in view of the absence of any concrete evidence and the lack of archaeologically attested scarabs workshops except the one identified by Christa Mlinar at Tell el-Dab^ca⁵⁹, other lines of evidence need to be taken into consideration as well. The so far archaeologically almost totally unknown royal residence of Itj-Tawy, usually identified to be located close to the modern village of el-Lisht in Middle Egypt, and its precise moment of abandonment and move to Thebes is still debated and mostly inconclusive⁶⁰. Equally sketchy is our knowledge about the gradual breakdown of the late Middle Kingdom administrative system⁶¹. There is evidence that this change happened much faster in northern region of Egypt than in the south, where cultural traditions and provincial administration seem to have continued without major changes for much longer, which is especially visible in the ceramic and sealing evidence. This can also be confirmed by the relative stability and continuity of several elite families from El-Kab and Edfu that are known from their tombs and stelae⁶². Also problematic to determine is whether the beginning of the Hyksos rule in the Delta needs to be equated with the abandonment of Itj-Tawy and the end of the central government and its administrative system, or whether we should envision a time when these two dynasties existed simultaneously. As far as current evidence stands, the gradual influx of foreign settlers from the Canaanite region over the period of the Middle Kingdom, which eventually culminates in the dynasty of Hyksos rulers, can be associated with large scale trading activity in the Eastern Mediterranean. Up to the military conflict with the Theban rulers of the 17th Dynasty, which is confirmed by written sources, there is no real indication to a hostile relationship between them and the rest of Egypt. The new evidence from Edfu certainly provides evidence for trade contacts and possibly diplomatic relations. The inscribed stone blocks from Gebelein, which show the names of Khyan and Apophis could have belonged to a local shrine in the area to which those two Hyksos added to and which could be signs for a more widespread building activity than previously assumed⁶³. Of course with Apophis, we are already in the late Second Intermediate Period and the Theban kingdom of the 17th Dynasty rulers is well established at Thebes, which makes a possible building project naming Apophis at Gebelein puzzling. A possible explanation could be that the loyalties of local elites and their respective towns varied as we hear about in the Kamose stelae such as in Middle Egypt where there seems to have been Egyptians loyal to Hyksos rulers.

It is evident that these are important factors to consider when analyzing the context of the Khyan sealings at Tell Edfu. In the following paragraphs we would like to provide a different outlook into the ongoing debate about a possible chronological overlap between the mid-13th Dynasty rulers and the early Hyksos kings. In this respect, it is useful to take another look at several contexts from Tell el-Dab^ca for the presence of the Khyan sealings especially in the Hyksos palace,

⁵⁷ Bennett 2002, 131; Bennett 2006, 239. Ryholt has assigned Nebiriaw to the Theban rulers of the 16th Dynasty, who were listed in pTurin column 11. Nebiriaw can be found in entry 11/5 and is marked with a reign of 26 years, see Ryholt 1997, 201–202 tab. 41. Polz follows this chronological framework in more recent study, see Polz 2007, 5–11. Another possibility is that Horemkhauef dates to the 13th Dynasty as has been proposed by W. V. Davies, see Davies 2001, 119–121. The current debates show that it is certainly difficult to assign such an accurate date given the many chronological problems in this period.

⁵⁸ This hypothesis has been discussed in depth by Ilin-Tomich 2014.

⁵⁹ Mlinar 2004.

⁶⁰ For a recent attempt to investigate the location at el-Lisht and possible links to the presence of the royal residence, see Lorand 2013.

⁶¹ Quirke 2004.

⁶² See Marée 2009; Davies 2010, for further details.

⁶³ For a concise presentation of the evidence and context of these two often cited blocks from Gebelein, see Polz 2006.

which has recently been excavated in area F/II⁶⁴. The new discovery of a domestic/administrative quarter in area R/III also dating to the Hyksos Period also revealed the presence of several Khyan sealings⁶⁵. In addition, it is important to take another look at the frequently cited context that contained a wide variety of different clay sealing fragments spanning the time from the late Middle Kingdom, the Second Intermediate Period and the New Kingdom from the workshop area close to palace F in the area of Ezbet Helmi at Tell el-Dab^ca⁶⁶.

The recent fieldwork focusing in area F/II has led to the discovery of numerous sealings discovered in various trash deposits linked to this palatial complex. A considerable concentration of discarded clay sealings, together with a small number of actual scarab seals, was found in the large offering pit L81 and fill layer L637⁶⁷. The latter deposit, which is situated in court D of the building complex, just to the south-west of the magazine complex E, has been interpreted as a fill of trash in a pit in which the sealings were discarded together with other occupation debris⁶⁸. While most of the seal impressions show decorative motifs, about 15 of them are personal name sealings and three have royal names. Only the latter have been published in the preliminary report by Nicholas Sartori. One of those includes the cartouche of Sobekhotep III and the other two fragments show the name of Neferhotep I⁶⁹. Both of the clay sealings were stamped with a seal of the so-called Sobekhotep group, which is easily recognizable because it shows the filiation of the king next to his name⁷⁰. These rulers are securely dated to the mid-13th Dynasty in the Turin King List⁷¹. Sartori interprets this curious occurrence of these royal names within the wider context of the Hyksos palace as evidence for a long-term storage of old objects⁷².

The other context worth mentioning here is the large pit L81, which contained among other objects and sealings eight fragments naming Hyksos ruler Khyan. Pit system L81 comprises an interesting archaeological feature, it is of a very large size and contained not only significant amounts of ceramic vessels, but also numerous other categories of small finds, which makes this a very large assemblage with a complex and varied content⁷³. While the pit is marked by several phases of depositing and re-cutting⁷⁴ the analysis of the ceramic evidence strongly indicates that this happened within a relatively short period of time, as the ceramics from the lower levels did not show any difference to the ones from further above in the fill. In fact, a lot of vessels had matching fragments in different sub-layers of the pit filling. None of the objects found in this fill of the pit can be directly linked to any specific occupation level(s) in relation to the palace complex where floor levels have been rarely preserved. According to the pottery evidence, two different dates have been proposed for the pit system L/81. One that dates it to the earlier phase and transition between E/1 to D/3 of the palace complex⁷⁵, but the other opinion suggests a later date to phase D/2⁷⁶. Out of the 100 clay sealing fragments found here, a total of eight sealings naming

⁶⁴ Bietak 2011; Bietak et al. 2012/2013.

⁶⁵ Sartori 2009; Bietak et al. 2012/2013, 25–26.

⁶⁶ Bietak 2004.

⁶⁷ Sartori 2009.

⁶⁸ Sartori 2009, 284; see Bietak et al. 2012/2013, 20 fig. 3; and 24. The nearby magazine E might have contained sealed commodities that were opened and/or sealed leading to the accumulation of discarded clay sealings in courtyard D.

⁶⁹ Sartori 2009, 284–285 figs. 4, 5.

⁷⁰ Ben-Tor 2007, 38–39 pl. 21.

⁷¹ Ryholt 1997, 34–37 tab. 9.

⁷² Sartori 2009, 284. He refers to the similar occurrence of sealings dating to different periods in the New Kingdom palace complex at Ezbet Helmi, see Bietak 2004, 43–55.

⁷³ See Aston – Bader 2009, 19 for further details on the content of this pit.

⁷⁴ See Bietak et al. 2012/2013, 25 fig. 8 which shows the various phases of deposition cutting into each other within L81.

⁷⁵ Aston – Bader 2009, 73. For an overview of the chronology and the preservation of the archaeological remains, see Bietak et al. 2012/2013, 19 fig. 2.

⁷⁶ See Forstner-Müller – Rose 2012, 181–183. This point of makes a lot of sense if the pit system was indeed filled as the result of a large scale trash deposit and levelling operation linked to the abandonment of the palace complex.

Khyan have been identified which were stamped by at least four different seals⁷⁷. It is possible to interpret the presence of these discarded clay sealings and scarabs as evidence for administrative activity having been carried out either directly in these open courtyards, which were also used to discard trash in pits after larger feasting events. Another possibility is that the sealing fragments were discarded from activity carried out in the nearby magazine tract G⁷⁸. The majority of the sealings can be dated to phase between phases E/1 and D/3 of the palace complex, which dates to the mid-15th Dynasty⁷⁹. From an archaeological perspective, it is also evident that these contexts are secondary trash deposits and mainly provide a *terminus ante quem* for the sealings. Nevertheless, it is noteworthy, even if the archaeological context is not pristine, that sealings of two rulers of the mid-13th Dynasty, Sobekhotep III and Neferhotep I, have been found at a palatial complex of the Hyksos Period.

As mentioned above, this has been used as evidence for a large-scale re-use of earlier scarabs dating to the late Middle Kingdom during the 15th Dynasty of the Hyksos Period as suggested by Daphna Ben-Tor, which currently cannot be proven or disproven. In this respect it is also important to mention the often cited sealing corpus recovered from the workshops attached to the New Kingdom palace complex at °Ezbet Helmi, which have become the standard reference for emphasizing the unreliability using sealing evidence for chronological conclusions⁸⁰. In terms of published archaeological details as to the precise context of these clay sealings some information is presented by Manfred Bietak. The sealings were found in floor deposits associated with eight cubicles marked by small mud brick platforms or podiums to the rear of a larger workshop complex, which has been dated to the Thutmosid Period (phase C2, Thutmose III–Amenhotep II)⁸¹. This part of the building has been interpreted as administrative offices. In her recent MA thesis, Ulrike Zeger provides an in-depth analysis of the sealings from this specific context at °Ezbet Helmi⁸². She was able to present additional details as to the distribution of the various chronological periods to which the sealing fragments can be assigned⁸³. Zeger remarks that there is an especially strong concentration of late Middle Kingdom (about 15 clearly identified examples) and Second Intermediate Period motifs (about 31 identified seal impressions) including those of the so-called Late Palestinian series. One of the examples shows a sealing that was stamped by a royal name seal with the name of the Hyksos ruler Yaqubhar, whose close chronological proximity to Khyan has been suggested on stylistic grounds⁸⁴. It was also countersealed by a typical late Middle Kingdom personal name seal⁸⁵.

Sealings that can be assigned without doubt to the New Kingdom are much less common (a total of three)⁸⁶. From the published data, it seems that this specific context contains indeed a mix

⁷⁷ Sartori 2009, 285–287 figs. 6–11. It is evident that all the sealings in L81 come from a secondary or tertiary context. For a general overview of the Khyan sealings found in area F/II especially with regard to their context, see also I. Forstner-Müller's contribution in this volume.

⁷⁸ For a complete plan of palace complex F/II, see Bietak et al. 2012/2013, 20 fig. 3.

⁷⁹ See Bietak et al. 2012/2013, 24; Aston – Bader 2009, 20, who point out that »the entire ceramic material can be dated to period E/1=D/3«. For a different opinion, see Forstner-Müller – Rose 2012, 181–182.

⁸⁰ See discussion by D. Ben-Tor, this volume and Sartori 2009, 184 no. 10.

⁸¹ Bietak 2004, 47–48 fig. 4. The author describes the exact context of the sealings being found in »elaborately stratified layers of ash and loam«, which were on top of the »red soil« (probably from an older burnt deposit as there is no evidence that any burning happened directly within this structure) that served as flooring. Further deposits were found next to each »podium«, which were left »un-compacted and intermingled with pockets of ceramic waste«. So far no profile drawing of this context has been published, which would confirm the archaeological deposition process involved and also help to visualize the accumulation of layers on top of the burnt floor level.

⁸² Zeger 2009.

⁸³ In the introduction of this study, which deals with the archaeological data, no further details as to the stratigraphy of the sealing deposits are given, which is disappointing, see Zeger 2009, 10–11.

⁸⁴ Ben-Tor 2007, 106–107.

⁸⁵ Bietak 2004, 49–52 fig. 10.

⁸⁶ Zeger 2009, 5. 58–59 tab. 2. The total number of sealings, including several scarabs from the workshop, comprises more than 70 seal impressions and 10 scarabs. Only 2/3 of the material was well enough preserved to allow for a precise assignment to a specific chronological period. Also important to note is that out of the five sealings attribu-

of motifs from different time periods and the explanations have centered on the re-use of scarabs and long-term storage of goods dating to the Second Intermediate Period until the reign of Thutmose III.

However, the striking fact that New Kingdom sealings are only present with about three examples of more than 70 identified sealings in total raises important questions about the possible interpretation. Bietak's explanation for this unusual mix of different motifs dating from the late Middle Kingdom to the New Kingdom focuses on the assumption that seals of the late Middle Kingdom were looted from tombs during the rule of the Hyksos and therefore most of the commodities from which the sealing fragments originate were probably sealed in the late Second Intermediate Period by officials re-using older scarabs. These commodities were then stored in magazines at Avaris and fell into the hands of officials under Ahmose after his conquest of the city. The recovered commodities were then transferred to the magazines of the workshops where they were later opened⁸⁷. However, it is more likely that this particular assemblage represents the typical mix of sealings that characterizes the very early 18th Dynasty, and the rulers who are antecedents of Thutmose III (Ahmose, Amenhotep I and Thutmose I). In this case, it would be possible to conclude that at the beginning of the early 18th Dynasty a large portion of scarabs used for administrative purposes still displayed motifs of the Second Intermediate Period tradition and earlier, with a few new styles and motifs appearing that would become popular in the later 18th Dynasty gradually replacing the older styles. Such a gradual shift concerning cultural change in general has also been observed for example for ceramics, which show much affinity to the late Second Intermediate Period tradition during the early 18th Dynasty. A more significant change to new forms can be seen from the reign of Thutmose III onwards.

Recent fieldwork in area R/III directed by Irene Forstner-Müller (see her contribution in this volume) also found several Khyan sealings⁸⁸. They were found below the occupation levels of this town, which is characterized by domestic buildings and storage installations dating to the 15th Dynasty. The Khyan sealings were found in fill layers that can be associated with the earlier phases of settlement activity in this area dating to the early Second Intermediate Period. The first occurrence of a Khyan sealing belongs to a fill layer which has been assigned to the phase E/1 in the general stratigraphic sequence of Tell el-Dab^ca which is paralleled in area F/II. These various find spots of Khyan sealings and the associated stratigraphy also confirm that he must have been one of the early Hyksos kings⁸⁹.

A last line of recent research that needs to be added here concerns the evidence for absolute dates by radiocarbon samples from Tell el-Dab^ca, which are discussed in depth by Felix Höflmayer in this volume addressing Khyan's place within the absolute chronology. The recently published radiocarbon dates from Tell el-Dab^ca in conjunction with the Egyptian chronology project based at the University of Oxford have also contributed further data to the existing questions about the duration and absolute dates for the transition of the late Middle Kingdom into the Second Intermediate Period⁹⁰. While the Oxford chronology project established that the historical Egyptian chronology is in relatively good agreement with the absolute dates obtained during the recent analyses carried out as part by this research group based in Oxford, the radiocarbon dates from Tell el-Dab^ca show a rather large discrepancy between the dates assigned by the excavators and those obtained by the ¹⁴C analysis⁹¹.

ted to the 18th Dynasty, two are more likely earlier in date, see Zeger 2009, 15–17. 36. The only three examples (!) which could date without doubt to the New Kingdom are nos. 8915D, 8983 and 8984, see Zeger 2009, 47. They all belong to the Zeger's group 11c »Götternamen und Kryptogramme«.

⁸⁷ Bietak 2004, 54.

⁸⁸ Forstner-Müller – Rose 2012/2013, 62; Reali 2012/2013, 69–71. Chiara Reali is currently writing her doctoral thesis on the sealing material from this excavation area.

⁸⁹ See details in the contributions by I. Forstner-Müller – C. Reali, this volume.

⁹⁰ See contribution by F. Höflmayer in this volume.

⁹¹ For further details on this issue, see discussion by F. Höflmayer in this volume. For the dates from Tell el-Dab^ca, see Kutschera et al. 2012. For the Oxford project, see Bronk Ramsey et al. 2010; Shortland – Bronk Ramsey 2013.

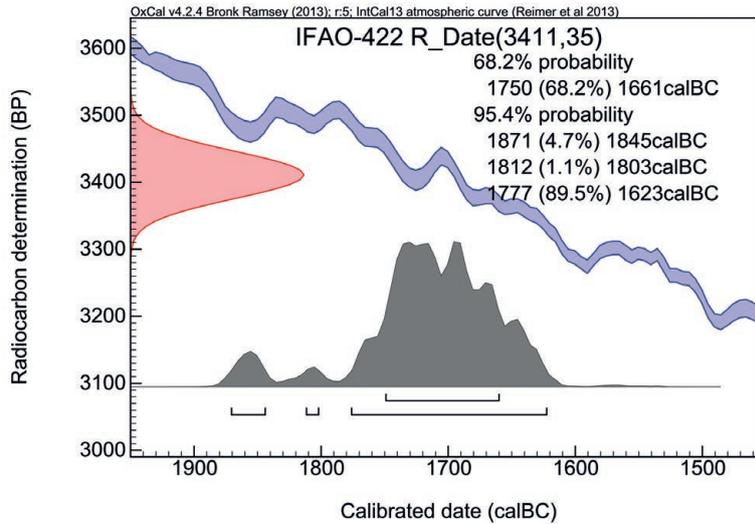


Fig. 16 Calibration curve of the radiocarbon sample from US 2654 at Tell Edfu (we would like to thank F. Höflmayer [OeAW-OREA] for sharing the updated version using the latest calibration curve)

Several samples of organic material from the administrative building complex excavated at Tell Edfu have been collected for radiocarbon analysis and were sent to the laboratory of the French Archaeological Institute (IFAO) in Cairo. This laboratory unfortunately lacks the option to obtain radiocarbon dates using Accelerator Mass Spectrometry (AMS), which makes it necessary to send a large quantity of a specified weight for each sample and which in most cases excludes the use of short-lived samples. However, one of the samples from the context in which the Khyan sealings were discovered has been successfully dated. This sample consists of several large pieces of charcoal which were found on top of the bench from where the sealing accumulation was excavated and the archaeobotanical analysis carried out by Ahmed Fahmy identified it as being the *acacia raddiana savi* species. After calibration, the results showed that the sample can be dated at 89.5 % between 1777–1623 calBC and at the 68.2 % to 1750–1661 calBC⁹². As Felix Höflmayer points out in his contribution to this workshop, this date fits very well to the radiocarbon dates published for the transition between stratum E/I and the beginning of D/3, which are associated with the occurrence of the Khyan sealings at Tell el-Dab^a. These dates fall at 95.4 % between 1746 and 1689 calBC, which is remarkably similar. Of course, the authors are fully aware that the one ¹⁴C sample for the relevant context from Tell Edfu is not enough to be definitive about the results but for the moment it is another piece of evidence that indicates a rather good fit to the more numerous and detailed radiocarbon dates from Tell el-Dab^a.

Furthermore, the traditional historical dates for the so-called Sobekhotep group of the mid-13th Dynasty cover the overall period between 1749–1710 B.C., which would make a shorter time interval that separates the first Hyksos rulers and the mid-13th Dynasty kings a strong possibility but of course more data needs to be gathered in order to fully back this up by archaeological evidence⁹³. As the situation stands now, everything indicates that Khyan and Sobekhotep IV were not reigning 100 years apart as traditionally postulated but their reigns were much closer in chronological terms, of which the precise time frame in calendar years is still difficult to estimate based on the available data.

As can be seen by the various lines of evidence, there is still much to debate with regard to the issue of the beginning of the Second Intermediate Period and the precise relationship and chrono-

⁹² This is based on the Analysis report IFAO_0422.

⁹³ See details by J. Höflmayer, this volume.

logical overlap between the first Hyksos rulers and the corresponding Egyptian kings but it is the hope of the authors that the various points presented in this contribution will be used for future research and discussions. The ongoing excavations at both sites, Tell el-Dab^a and Tell Edfu, might reveal more about these issues in the future and hopefully will lead to some more clarification. This workshop is certainly the first step in opening up a new debate on the nature of the Hyksos rule prior to the wars against the 17th Dynasty based in Thebes.

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Vera Müller

Chronological Concepts for the Second Intermediate Period and Their Implications for the Evaluation of Its Material Culture¹

1 Introduction

The lack of a comprehensive set of historical data as well as the lack of clearly defined and well-dated archaeological contexts still leaves us with a whole range of different concepts for the historical reconstruction of the Second Intermediate Period (SIP). Each of these is based on several hypotheses consisting of rather complicated networks of information. Thus, as soon as one or more aspects is changed, the whole network is affected. As long as the available data do not allow for establishing an unequivocal system, the use of a precise terminology as well as a reference to the scheme that is being addressed, are of paramount importance to avoid further misunderstandings. This is essential when material culture is connected with historical data and vice versa.

In this article the basis for the historical reconstructions will again be scrutinized, and the implications for the evaluation of material culture in using different concepts will be demonstrated. In addition, certain aspects concerning the historical background for the positioning of king Khy-an will be addressed.

2 Concepts for the Second Intermediate Period

2.1 General remarks

For the time being it is rather the exception than the rule that scholars refer to the particular model they use for the SIP – especially when focusing on the material culture and not specifically on historical or chronological matters. A glance at the most frequently used models from the last two decades for the SIP in studies concerning the chronology immediately reveals the differences (figs. 1. 2)². The discrepancies not only concern the relative alignment of the dynasties but also the absolute dates – one extreme version in this respect is represented by the ultra-low chronology favored by R. Krauss³. While the validity of absolute dates is a matter of its own that will not be addressed in this context⁴, the necessity of referring to the chronology used should be self-evident when dealing with centuries rather than with the designation of dynasties.

¹ I would like to thank Astrid Hassler, Nadine Moeller and Pamela Rose for their useful comments on this paper and the editing of the English.

² These models were compiled with the data presented in the publication cited in the headings of both figures. Since the authors of the »Handbook of Oriental Studies« do not give any absolute dates, the left scheme in fig. 1 was generated by a combination of information presented in the article written by T. Schneider and the data presented at the end of the book and said to be by the editors, see »table of contents« in: Hornung et al. 2006, IX.

³ See the chronological table in Hornung et al. 2006, 290–295; Krauss 2007; Krauss 2003.

⁴ For a critical view see for instance Schneider 2008.

Not integrated in the presented models are the diverse definitions for the various dynasties that should be covered under the designation SIP. These definitions vary between a maximum extent covering the complete period of the 13th to the 17th Dynasty⁵ and the avoidance of this term altogether⁶. These discrepancies alone demand the use of a clearly-defined terminology when referring to the SIP.

In addition, there is still no agreement in which way the different dynasties should be arranged and relate to each other. While it is generally accepted that the 13th Dynasty immediately succeeded the 12th Dynasty, neither the duration nor the number of kings of the 13th Dynasty are clear⁷. The same holds true for the 14th Dynasty, for which furthermore the point of its beginning is disputed⁸. Also the beginning, duration and chronological positioning of the 16th Dynasty is not yet settled. For the 17th Dynasty it is clear that it should be aligned with the end of the SIP. But again, the number of kings is discussed as well as the question as to whether it succeeded the 13th or the 16th Dynasty. Finally, although scholars agree that the 15th Dynasty consisted of six Hyksos kings ruling contemporaneously with at least the latter part of the 17th Dynasty of Thebes, it is disputed which kings should be attributed to this dynasty next to Apophis and Khyan. The situation gets even more complicated as soon as the possibility of overlaps between different dynasties is taken into account⁹.

As each concept has major implications for the reconstruction of the socio-political landscape of this period, one should be aware of the unsettled situation concerning the discussion of the relative chronological alignments and time range of dynasties 13 to 17, as well as the various definitions for the beginning of the SIP. The definition of the concept used not only influences the degree of certainty with which the material culture is correctly attributed to specific historical periods, but also the historical reconstruction of socio-political events is directly dependent on their best-suited assignment to a certain historical period. Thus, for instance, when identifying the 14th Dynasty with several independent local kingdoms in the Delta, the determination of the point in time at which this happened has a considerable impact on the reconstruction of the political landscape. The emergence of local kingdoms in a situation with a strong and coherent central government seems explicable only with difficulties, and it is much more understandable in a situation when the country is politically fragmented. Thus, the political situation directly after the end of the 12th Dynasty differs significantly from the situation at the middle or end of the 13th Dynasty. But what indications for the fragmentation of the country do we really have? Can the lack of historical monuments and the absence of high quality art be taken as arguments for the claim of an unsettled political situation marked by turmoil?

The same holds true for determining the precise point in time at which the separation into more independent regions is supposed to have occurred, especially if this event is connected with the development of regionalization in the archaeological material. Strongly related to this point is the surmise of the relocation of the capital from Itj-tawy to Thebes in the middle or towards the end of the 13th Dynasty. Many scholars attribute the development of local styles, the decline of a court style and the cessation of a national administrative system to this event.

⁵ Ryholt 1997; Kitchen 2000; Marée 2010a.

⁶ Franke 1988, 245–248.

⁷ Usually only a selected number of the most prominent rulers are named in chronological compilations, Hornung et al. 2006, 492, a more detailed version in the same volume can be found in the chapter by Schneider 2006, 175–181; see also von Beckerath 1997, 137–139 and Ryholt 1997, 69–93.

⁸ See below.

⁹ Ilin-Tomich 2014; Davies 2010, 225 n. 17; Marée 2010a, XIV; Marée 2010b, 277; Polz – Seiler 2003, 46–47; Bennett 2002, 128–129; and others.

2.2 Overview of concepts of the SIP

Not all the different concepts will be discussed here, but instead a choice will be presented of the most often-used and referenced models published during the last two decades (figs. 1. 2)¹⁰.

While J. von Beckerath¹¹ and K. A. Kitchen¹² agree on the succession of the 17th Dynasty directly after the 13th Dynasty, K. Ryholt proposes a completely different scheme with the insertion of the 16th Dynasty between the 13th and 17th Dynasty¹³. With this suggestion he follows an idea already formulated in 1947 by H. E. Winlock, who allocated most of the rulers traditionally attributed to the 17th Dynasty to the 16th Dynasty¹⁴ and considered the rest as »belonging to the real Seventeenth, which is, of course, part of the New Kingdom«¹⁵. This insertion not only affects the concept of the length of the 17th Dynasty but also the perception of the number of kings that have to be attributed to either Dynasty¹⁶. While to J. P. Allen the absence of a heading line in the Turin Canon between the 16th and 17th Dynasty is a clear sign to consider these two Dynasties as closely linked¹⁷, Ryholt's main reason for the division of the Theban Dynasties into two lies in his surmise that Thebes was captured by the Hyksos¹⁸. This idea is refuted by many scholars. Most convincingly, W. V. Davies was able to deduce from the inscriptions in the tomb of Sobeknakht that the military action against Thebes should in all probability be attributed to the Nubians¹⁹. In addition to this point, D. Polz made clear that neither at Thebes nor at Gebelein did the preserved evidence suggest any Hyksos presence²⁰.

In the arrangement of von Beckerath and Kitchen, the 17th Dynasty was contemporaneous in its entirety with the 15th Dynasty and formed the southern counterpart to the Hyksos realm, which ruled the northern half of the country. There are, however, discrepancies between von Beckerath and Kitchen in the alignment and reign lengths concerning the 14th and 16th Dynasties. While von Beckerath considers the 14th Dynasty as several kingdoms ruling in the eastern Delta covering the latter part of the 13th Dynasty, Kitchen adopts Ryholt's proposition that the 14th Dynasty should already start with the end of the 12th Dynasty. This suggestion was also already formulated in 1947 by Winlock²¹. According to Kitchen the 16th Dynasty too should be considered as contemporaneous with the 13th and 14th Dynasty, covering the whole time span between the end of the 12th until the beginning of the 18th Dynasty. Under this scheme the country would have been constantly split into three to four different dynasties for the whole period of ca. 220–250 years covering the time period from the death of Nofrusobek until the successful defeat of the Hyksos by Ahmose. By contrast, von Beckerath proposes that the 16th Dynasty started together with the 15th and 17th Dynasty after the end of the 13th and 14th Dynasties²². His argument for this is based on the assumption that the report in Manetho on the seizure of Memphis by the first king of the Hyksos has to be considered as a major historical event that called for a division of territory by the protagonists.

¹⁰ Although frequently cited, the compilation of Shaw 2000 will not be considered here, as it largely relies on von Beckerath's absolute dates and Ryholt's concept of the arrangement of dynasties 15 to 17. He made, however, no decision concerning the 14th Dynasty, see Shaw 2000, 481. Furthermore, he starts the SIP after the end of the 13th Dynasty.

¹¹ von Beckerath 1997, 131. 136–139. 188–189.

¹² Kitchen 2000, 45.

¹³ Ryholt 1997, 151–162.

¹⁴ Winlock 1947, 104–149.

¹⁵ Winlock 1947, VIII.

¹⁶ The striking differences between the concept of a long 17th Dynasty versus a consecutive alignment of the 16th and the 17th Dynasties is shown in Polz 2007, 5–59 with tab. 1 on p. 7.

¹⁷ Allen 2010, 3.

¹⁸ Ryholt 1997, 151. 160. 167.

¹⁹ Davies 2010, 223 no. 2; Ilin-Tomich 2014, 164.

²⁰ Polz 2007, 8–11. 88.

²¹ Winlock 1947, 95–96.

²² von Beckerath 1997, 136.

CHRONOLOGY OF THE MIDDLE KINGDOM AND THE 2nd INTERMEDIATE PERIOD

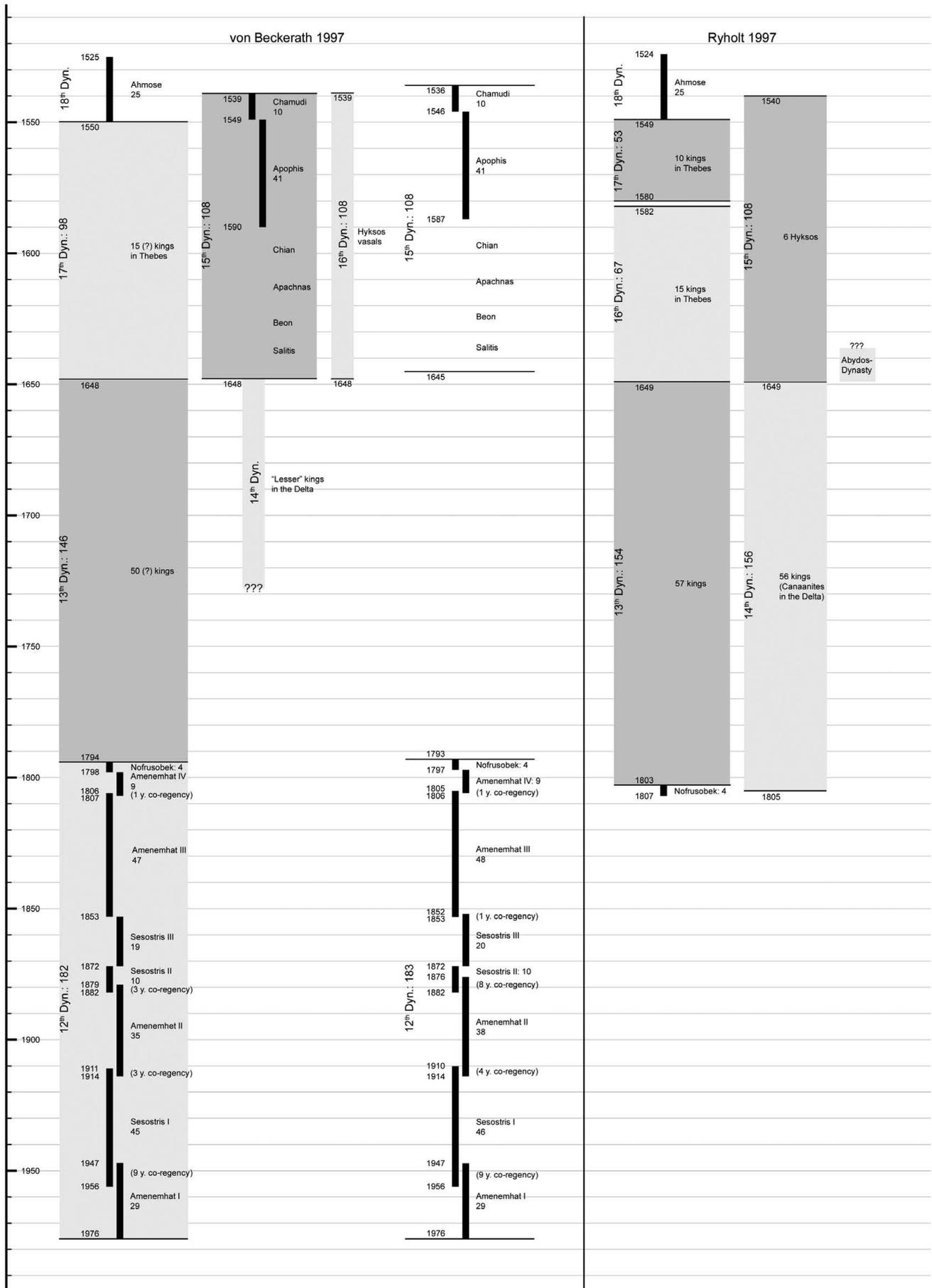


Fig. 1 Chronological scheme of the Middle Kingdom and Second Intermediate Period (after von Beckerath 1997 and Ryholt 1997)

CHRONOLOGY OF THE MIDDLE KINGDOM AND THE 2nd INTERMEDIATE PERIOD

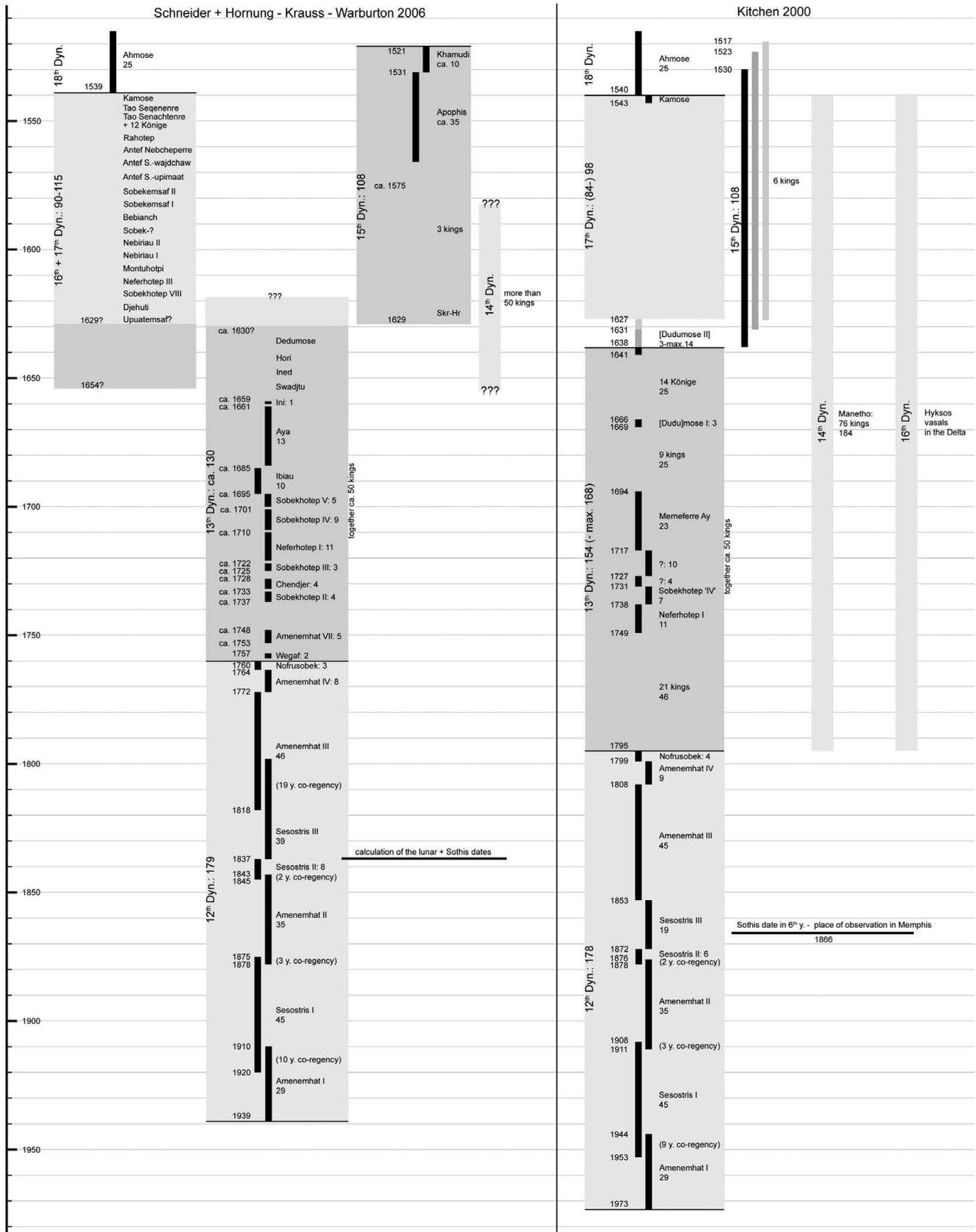


Fig. 2 Chronological scheme of the Middle Kingdom and Second Intermediate Period (after Schneider – Hornung – Krauss – Warburton 2006 and Kitchen 2000)

According to Ryholt no overlap has to be surmised between the 13th and 16th Dynasty, while T. Schneider leaves this open as a matter of discussion²³. Other scholars, like C. Bennett, have pointed out that the genealogies of the governors of El-Kab further support an overlap between the 13th and the Theban Dynasties²⁴. With reluctance, this idea is supported by Davies, albeit only as one possibility²⁵.

There is no question that the reason for these different concepts is the direct result of the lack of information, but interestingly in discussions the lack of resolution of the following issues is often ignored:

- the beginning of the SIP (at the end of Dynasty 12, in the middle of Dynasty 13, in the latter third of Dynasty 13 or at the beginning of the 15th Dynasty);
- the number of kings belonging to a specific dynasty, including the correct attribution of specific kings to specific dynasties, especially concerning the 16th and 17th Dynasties; several kings are only known via scarabs;
- the regnal years of most of the kings; and thus
- the length of the different dynasties 13 to 17;
- the alignment of these dynasties to each other.

2.3 Concepts concerning the beginning of the SIP

Concepts about the start of the SIP at the beginning of the 13th Dynasty rely on different arguments. Thus K. Ryholt conceives the 14th Dynasty as already starting a little earlier than the 13th Dynasty, right at the end of Dynasty 12²⁶. This relies on the hypothesis that the whole 14th Dynasty consisted of Semitic kings whose forefathers migrated during the late 12th Dynasty from Canaan to Egypt and established an independent kingdom in the (eastern) Delta very soon afterwards that in all probability was responsible for the collapse of the former Dynasty²⁷. Accordingly, the country would already have been divided »between two or more rulers« at the time of the end of the 12th and the beginning of the 13th Dynasties²⁸. A very strong argument is furthermore seen in the absence of all kings after Amenemhat IV (Abydos list) or Nofrusobek (Saqqara list) until Ahmose in the royal canons of the New Kingdom²⁹, reflecting the Egyptian perception of a period that was not worth commemorating, or as Ryholt put it »made them unworthy of inclusion in the ancestor cult«³⁰. In his view this perception is further strengthened by the argument that the well-attested king Sheshi should not only be attributed to the 14th rather than the 15th Dynasty but to the early part of that Dynasty³¹. This view is based on the discovery of one (!) seal impression naming Sheshi, which was found together with those of kings Khabaw (four specimens) and Djedkeperu (10 specimens) and more than 4,000 non-royal seal impressions in the fortress of Uronarti that are dated to the early 13th Dynasty³². The latter two kings are, however, not mentioned in the Turin Canon and their position in the 13th Dynasty is a conjecture by Ryholt³³. As the position of these finds is generally considered as a secure context, discussions are mainly based on the correct

²³ Schneider 2006, 195–196.

²⁴ Bennett 2002; Polz – Seiler 2003, 46–47.

²⁵ Davies 2010, 225.

²⁶ Ryholt 1997, 310–311.

²⁷ Ryholt 1997, 293–294.

²⁸ Ryholt 1997, 311–312.

²⁹ Ryholt 1997, 311.

³⁰ Ryholt 1997, 311.

³¹ Ryholt 2010, 113–115.

³² Ryholt 1997, 321–322.

³³ Schneider 2006, 178; for the positioning of Khabaw and Djedkheperew see Ryholt 1997, 216–217. While the naming of two kings in antithetic position on the same architrave may suggest a coregency, the position of Djedkheperew as the immediate successor of Khabaw is a mere guess based on the findings of both of their sealings at Uronarti.

dating of the associated material³⁴. Besides the rather weak basis of just one seal impression for establishing this synchronism, a question about the quality of the context has to be raised. D. Ben-Tor has already pointed out that sealings from the early New Kingdom were retrieved from the same context³⁵.

More weight, however, should be given to a comment by C. Knoblauch, who together with L. E. Bestock recently started to re-investigate this site. He pointed out³⁶ »... that according to the field diaries the excavator was not even present at Uronarti for some of the excavations in the granaries and treasury building, and when present seemingly left the excavations mostly to his workmen and Reis. In other words, the excavations proceeded with very little control and minimal documentation. The entries in the diaries for the clearance of the all-important room 157 (January 12–January 13, 1929), for example, make it clear that this was only one of a number of rooms that were cleared completely within two days at the very end of the excavation season. There is almost no description of the archaeology of this large room, nor are there any comments regarding the stratigraphic relationship of the seals (individually, or as a group) to other finds. The only mention of the seals is as follows: ›Found in debris: many frags of impressed mud, 1 ringstand. Cleared to mud floor and rubble.« (January 13, 1929). Moreover I argue that the use of the word ›deposit‹ by Reisner and Wheeler in their publications to describe the find context of the seals does not seem to coincide with the common modern usage where it refers to an intentionally created, and archaeologically sealed and homogeneous grouping of material. Rather, the word deposit is never defined by either Reisner or Wheeler and seems to simply refer to an observable spatial concentration of related artefacts.«

So we do not have a controlled excavation and in all probability no clean and secure context. That the sealings derive from a one-year administrative-cycle is just a conjecture based on the entry in a New Kingdom papyrus that documents an administrative cycle to encompass one year³⁷. There is no proof that this can be transferred to the find situation at Uronarti. Thus, by leaving aside this evidence we have no clear idea when this dynasty really started, how long it lasted and which region was controlled by its rulers.

According to M. Marée it is next to impossible for the time being to pinpoint the exact date for a division of the country into contemporaneous dynasties and thus the political disintegration of the country³⁸. Although the SIP is defined as a period when the control of resources and the overall political integration could no longer be upheld, it is not yet possible clearly to define its beginning. He rightly stresses the discrepancies between the political situation and the material culture, as the latter continued seamlessly³⁹. As the division into dynasties came down to us via Manetho and the sources he had at hand, Marée supports a broad definition of the SIP starting with the beginning of the 13th Dynasty.

J. Bourriau also starts the SIP with the beginning of the 13th Dynasty in recent years, as to her the »unified rule and cultural homogeneity of the Twelfth Dynasty broke down«⁴⁰. A regionalisation of ceramic development can already be observed by the late 12th Dynasty⁴¹. On the other hand, she considers a political break »after the abandonment of Lisht« that is dated to the period after Merneferre Aya, as he is the last king for whom monuments are attested in the whole country⁴².

³⁴ Ryholt 2010; Ben-Tor 2010, 94–95; Ben-Tor – Bonfil 2002, 36–39; Ben-Tor et al. 1999. S. Allen, for instance, advocated the late 13th Dynasty as the date for the ceramics deposited together with the sealings, see Ben-Tor et al. 1999, 55–58.

³⁵ Ben-Tor 2010, 95.

³⁶ Personal communication. I would like to thank Christian Knoblauch very much for sharing his knowledge with me and formulating this paragraph.

³⁷ Smith 1990, 207.

³⁸ Marée 2010a, XI–XII.

³⁹ See, however, Bourriau 2010.

⁴⁰ Bourriau 2010, 13.

⁴¹ Bourriau 2010, 11.

⁴² Bourriau 2000, 185. 198–199; among many others Ben-Tor 2010, 92; Grajetzki 2010, 307–308.

This situation is taken by many scholars as clear evidence that the court moved to Thebes and that the Middle Kingdom should end with this event⁴³.

Interestingly, Lisht revealed archaeological evidence for a continued settlement and cemetery (from the 12th throughout the 13th Dynasty)⁴⁴. The mention of Itj-Tawy on the Horemkhauef stela from Hierakonpolis is interpreted by Bourriau as sign that »Lisht lay still at the centre of ritual life in Egypt during the Second Intermediate Period«⁴⁵. Others take this stela as proof that Itj-Tawy continued in its function as capital, in combination with the lack of clear signs for the movement of the court to Thebes⁴⁶. Horemkhauef is chronologically linked to the tomb of Sobeknakht (II) at El-Kab as both tombs were decorated by the same artist who depicted himself in each of them⁴⁷. Sobeknakht can be connected with king Nebiryrau I in whose first year Sobeknakht's father became governor of El-Kab. He himself succeeded to this office either during the 26-year-long reign of this king or one of those immediately following, i.e. during the latter part of the 16th Dynasty⁴⁸. Horemkhauef lived at the end of the 13th Dynasty but it is unknown how old he became. Davies believes in the possibility that he reached an old age and that »The completion of the tomb decoration may have post-dated his stone stela by a considerable period of time«⁴⁹. Interestingly, Bourriau mentions pottery vessels from the beginning of the 15th Dynasty (str. E/1 of Tell el-Dab^ca) at Lisht-North⁵⁰.

In contrast to these models, others prefer to take the middle of the 13th Dynasty as the end of the Middle Kingdom, and respectively as the beginning of the SIP⁵¹. Again this view is based on the surmise that the country was fragmented, with the development of an independent kingdom in the eastern Delta, i.e. the 14th Dynasty with Nehesi as one of its early rulers⁵². Under which 13th Dynasty king this would have happened cannot, however, be exactly determined. The archaeological evidence from Tell el-Dab^ca seems to suggest his attribution to phase F of the site that can be roughly dated to the middle of the 13th Dynasty⁵³.

But when is the middle? This again is not undisputed, especially against the background of a possible overlap with the 16th Dynasty. Many scholars prefer to take Sobekhotep IV as the last king of a united Egypt, based on the fact that from his reign many monuments are preserved⁵⁴. As mentioned above, other scholars choose the reign of Merneferre Aya as the turning point in Egyptian history, after whom the country split into local kingdoms, because he is the last king of whom objects are found in Lower Egypt as well as Upper Egypt. But how many years following Merneferre Aya have to be added until the end of the Dynasty? Finally, some colleagues prefer the end of the 13th Dynasty as the historical turning point which is supposed to coincide with the rise of the Hyksos rule of the 15th Dynasty.

2.4 Implications of historical concepts on the evaluation of the material culture

The most direct way to relate material culture to the historical chronology is via epigraphic material naming kings. With respect to the Second Intermediate Period this otherwise unequivocal procedure is characterized by various pitfalls. First of all, the Turin King List, the only list mentioning every single king in this period, is much damaged and many parts are missing or cannot yet

⁴³ For instance Ben-Tor 2010, 92.

⁴⁴ Bourriau 2010, 13–14.

⁴⁵ Bourriau 2010, 17.

⁴⁶ Ilin-Tomich 2014, *passim*; Marée 2010a, XIII–XIV; Marée 2010b, 276; Ryholt 1997, 79.

⁴⁷ Allen 2010, 225 with further literature.

⁴⁸ Davies 2010, 224–225.

⁴⁹ Davies 2010, 225 n. 17.

⁵⁰ Bourriau 2010, 16–17.

⁵¹ For instance von Beckerath 1997, 137–139.

⁵² Bietak 2010, 151; Bietak 1984.

⁵³ Bietak 1984; see, however, the critical comments of Ben-Tor 2010, 105, on the lack of a clearly dated context.

⁵⁴ Grajetzki 2010, 305.

be reconstructed. Secondly, the more complete parts show that the same form of the royal name (i.e. *nomen* and/or *prenomén*) did not in every instance enter the list. Thirdly, Ryholt was able to demonstrate that mistakes happened by re-copying the list time and again. Thus, some royal names have to be exchanged and others were omitted. Fourthly, several royal names are currently only known from scarabs that cannot yet be identified with names in the King List. Fifthly, even if the name is identified in the King List, it is not yet defined as to how the different dynasties are arranged with regard to each other.

Depending on the model preferred, the SIP can thus in the shortest sense encompass 108 years, i.e. the purported length of the 15th Dynasty, until up to ca. 250 years, when the whole time span from the end of the 12th Dynasty until the beginning of the 18th Dynasty is understood as belonging to this period. It is obvious that the models used can result in quite divergent results, when transferred to the typological developments of the material culture.

At first glance this seems to be of only minor relevance. However, the difficulty becomes obvious when we try to describe and compare developments in the material cultural. The dating of typological sequences of pottery, for instance, is relatively clearly defined when using the dynastic terminology. But as soon as more general terminologies like ›late Middle Kingdom‹ or ›early SIP‹ are used instead, the situation can become confusing and invalid for comparative procedures.

Thus when for instance the different concepts for ›late Middle Kingdom‹ are applied to specific pottery types such as jars and so-called *zirs* of Marl C (fig. 3), the problem becomes obvious: while in the late 12th Dynasty only the first type of the Marl C jars and two different types of *zirs* are attested, in the beginning of the 13th Dynasty a different type of Marl C jar and *zir* were in use. The *zirs* from the middle of the 13th Dynasty were again replaced by two new variants. Thus, depending on which definition for the term ›late Middle Kingdom‹ is used, either completely different vessels could be meant or, when understanding the late Middle Kingdom as encompassing the whole 13th Dynasty, all variants could have been used simultaneously.

2.5 Models for the division of the Middle Kingdom and the SIP

Even if a consensus is reached that the SIP started after the reign of Merneferre Aya, the question arises as to how the rest of the Middle Kingdom and the SIP can be subdivided further. Is the SIP to be divided into two phases or three? Which parts then belong to the beginning, which to the middle and which to the end?

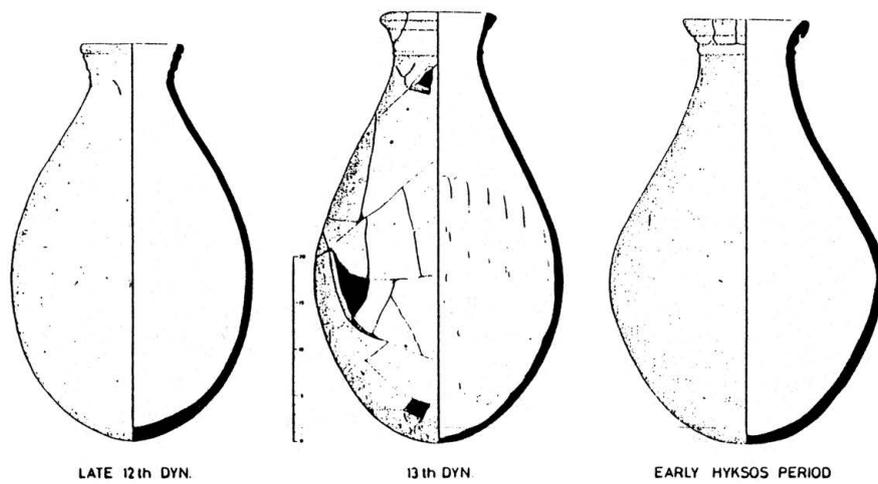
The same holds true of course for the Middle Kingdom. Is there just an early and a late phase? Or does it encompass more? How long did the beginning of the Middle Kingdom endure and what followed afterwards? The middle, mature or advanced?

It does not yet seem possible to propose a generally accepted agreement in the scientific community on the number or designation of the different phases. Depending on the material group and region, different divisions seem to make better sense. Thus, for instance, the usual development of pottery styles is a continuous one for which divisions always lead to artificial boundaries. Against this background a definition of an early, middle and late phase in the 13th Dynasty has to be understood as of about three equal thirds. But in this model, regional variations with their own developments are not accounted for. Furthermore, S. Quirke proposed a different scheme on the basis of the three-dimensional art of this period, that would suggest a very short first phase that »may have been over a decade, leaving a longer middle and a still longer late phase«⁵⁵. A completely different picture is created when dividing the period on the basis of political events as proposed by K. Ryholt⁵⁶. His scheme encompasses four phases, also with different durations, of which the first, of 55 years, is the longest.

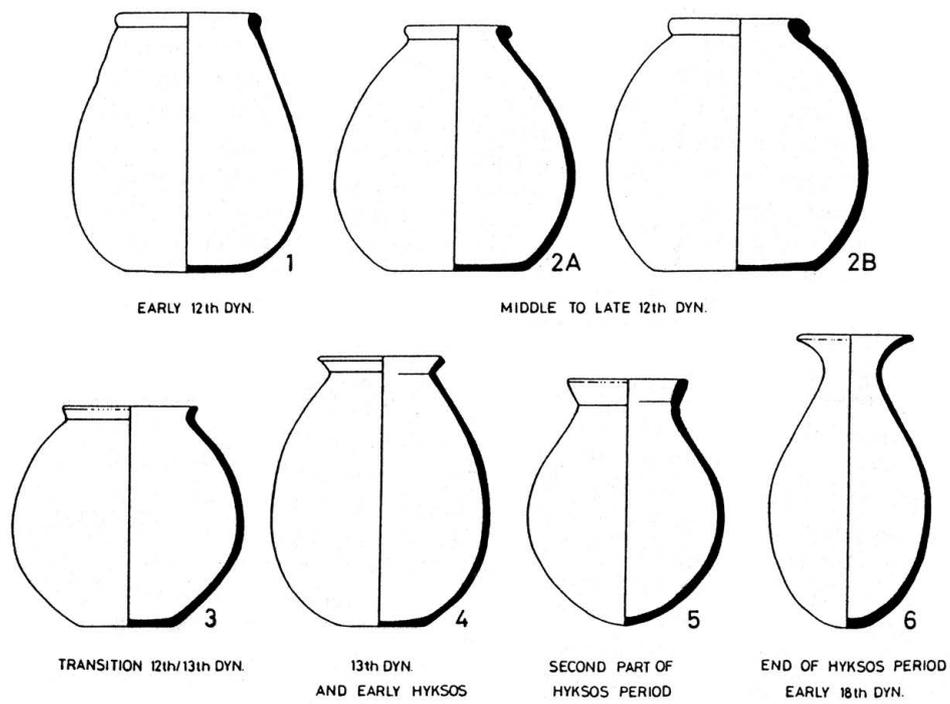
This situation again shows the importance of a clear definition of the chosen model in each published study.

⁵⁵ Quirke 2010, 62.

⁵⁶ Ryholt 1997, 296.



Marl-C jars typology (II-c fabric)

Development of the water jar (*zir*)Fig. 3 Development of jars and *zirs* made of Marl C (after Bietak 1991, figs. 8. 9)

3 The Turin King List

It is not the intention to re-evaluate the Turin King List here⁵⁷, but I would like to stress some points I find especially interesting in the context of this article's topic.

While Manetho is not very exhaustive concerning dynasties 13–17, including confusions in respect to the dynasties' attribution to Thebes and the »shepherds«, the Turin King List is still the most comprehensive historical source for this period – despite the many lacunae due to its bad state of preservation. After the removal of Gardiner's column IX (17–31) and nearly the complete column X, the remaining list gives a clear division into the respective dynasties⁵⁸.

As is well known, the dynasties of the Second Intermediate Period are listed one after the other. It is a tragedy that nearly all lines with headings and summations are lost or cannot yet be reconstructed in their original position. One of the few exceptions is preserved at the beginning of column VI (= Ryholt's 7/3) where the summary for the 12th Dynasty is preserved, mentioning eight kings who together reigned for 213 years, 1 month and 17 days. This number is of special interest because it shows that each reign was counted separately by ignoring the co-regencies attested in contemporary sources⁵⁹. In deducting the years of co-regencies a sum of between 178 and 183 regnal years for the dynasty is reached⁶⁰.

3.1 Dynasty 13

The heading for the following dynasty is also preserved: Dynasty 13 is introduced by the headline »The kings [who followed (?)/were (?)] after the [house of (?)/children of (?)] king [Sehot]jbre LHG«, i.e. Amenemhat I, the first king of the 12th Dynasty after whom that dynasty is named. It is not clear if this heading refers to the 13th Dynasty only or to the whole sequence of the SIP⁶¹. But it seems obvious that this heading summarizes kings not belonging to a single capital like the group of kings of the previous 12th Dynasty or to a certain family. With all due caution the formulation of the heading could point to a group of kings without a common denominator signalling thus the disparate character of this period.

According to K. Ryholt the position of two kings should be changed and he argues that at least six kings that are attested in contemporary sources should be added to the listed 51 kings in the papyrus⁶². The latter is challenged for five of the six kings by J. P. Allen who recommends that instead only two missing kings should be inserted⁶³. Thus, in all at least 53 kings should be attributed to the 13th Dynasty according to Allen and not 57 as suggested by Ryholt⁶⁴. This dispute reflects another conflict we have to deal with: for some dynasties more kings are attested in the epigraphic material than are known from the King List. Allen furthermore proposed that the last fragment in column 10 should be attached to the last line of column 8 where the fibres coincide with each other⁶⁵. This proposition was meanwhile confirmed by Ryholt⁶⁶.

The mention of »kingship« in the last line of this fragment could either be interpreted as the summation of the 13th Dynasty, and would thus fix the end of the dynasty on the papyrus⁶⁷. Or

⁵⁷ The newest reconstruction concerning the SIP can be found in Allen 2010 who made minor adjustments to the seminal reconstruction work done by Ryholt 1997. See also Ryholt 2004.

⁵⁸ Allen 2010, 1 with tab. 1.

⁵⁹ Ryholt 1997, 16; Schneider 2006, 175.

⁶⁰ Schneider 2006, 175 arrives at a slightly different number (»ca. 181 years«).

⁶¹ Ryholt 1997, 16 advocates the restriction to the 13th Dynasty.

⁶² An overview of Ryholt's scheme in opposition to that of Franke and some critical remarks on the arrangements is presented in Schneider 2006, 176 (fig. II.7.1).

⁶³ Ben-Tor et al. 1999, 50–51.

⁶⁴ Ryholt 1997, 72–73.

⁶⁵ Ben-Tor et al. 1999, 67 n. 3.

⁶⁶ Ryholt 2004, 137 with n. 20.

⁶⁷ Ben-Tor et al. 1999, 67.

it could mark the beginning of the 14th Dynasty⁶⁸. While there are only minor disputes about the number of kings and the length of Dynasty 13, it is not so clear what happened politically in the second half of the dynasty. As already mentioned above, many scholars assume that the court moved to Thebes at the latest after Merneferre Aya, because no monuments are known from the kings of the later part of the dynasty in the north of Egypt. This argument is not very consistent as also for several rulers from the powerful first half of the 13th Dynasty only scant remains are preserved in the Delta. A. Ilin-Tomich recently pointed out that from the kings not attested in the northern part of Egypt only one, namely Merkaura Sobekhotep VII, is unequivocally attributable to the 13th Dynasty⁶⁹. It has additionally to be stressed that neither at Lisht nor at Thebes has a capital of this time period been detected yet in excavations, nor do we know where these rulers were buried. Without new and further material this question will not be resolved.

There is no other dynasty of the SIP for which such an important number of entries with regnal years are preserved than for the kings of the 13th Dynasty. Out of the more than 50 kings exact dates for 16 of them are preserved⁷⁰. From the dated monuments of another five kings at least 100 years are covered for the 13th Dynasty. The whole length of the dynasty is conjectured on the one hand by emending the number of 453 years given by Manetho and the suggestion that the 13th Dynasty was ended by the Hyksos dynasty, which means subtracting the 108 years of the 15th Dynasty from the calculated ca. 250 years for the period of dynasties 13 to 17⁷¹. As only little is known about the kings following Merneferre Aya, it is surmised that the last decades saw many short and unimportant reigns. Not only the number of kings involved (ca. 25 rulers according to T. Schneider⁷²; 36 according to K. Ryholt⁷³) but also the time period (»some two decades«⁷⁴ versus 54 years⁷⁵) reflects the bad preservation of data. Furthermore, the hypothesis of the defeat of the 13th Dynasty by the Hyksos and the subsequent »power vacuum« in the southern part of Egypt has been strongly criticized by Ilin-Tomich who demonstrates the weak basis for this reasoning⁷⁶.

As mentioned above, the situation gets more complicated when an overlap of Dynasties 13 and 16 are proposed.

3.2 Dynasty 14

According to the Turin Canon, Nehesy, mentioned in the first line of Ryholt's column 9, has to be considered either as the first or second king of the 14th Dynasty – depending on one or two lost lines at the end of the preceding column 8⁷⁷. Otherwise this dynasty leaves us with a lot of open questions. Thus, Ryholt supposes that not only one but five kings are missing as the predecessors of Nehesy⁷⁸. His most important argument for this lies in his seriation of scarabs that suggests a close stylistic relationship between king Sheshi and Nehesy⁷⁹. This point is seen completely differently by D. Ben-Tor, who attributes Sheshi to the 15th Dynasty, like many other scholars⁸⁰.

According to Ryholt up to 63 kings can be attributed to the 14th Dynasty⁸¹, 33 of which are preserved in the Turin Canon but can otherwise not be identified by monuments or other archaeological and/or epigraphical material. Ryholt's column 10 is especially badly preserved with a large

⁶⁸ Allen 2010, 2.

⁶⁹ Ilin-Tomich 2014, 145.

⁷⁰ Schneider 2006, 180; Ryholt 1997, 191–197.

⁷¹ Schneider 2006, 181; Ryholt 1997, 196.

⁷² Schneider 2006, 181.

⁷³ Ryholt 1997, 196.

⁷⁴ Schneider 2006, 181.

⁷⁵ Ryholt 1997, 196.

⁷⁶ Ilin-Tomich 2014, 145.

⁷⁷ Ryholt 1997, 94.

⁷⁸ Ryholt 1997, 94.

⁷⁹ Ryholt 1997, 96.

⁸⁰ Ben-Tor et al. 1999; Ben-Tor 2010.

⁸¹ Ryholt 1997, 98–99.

part missing. Next to king Nehesy, objects of 11 other kings show stylistic similarities suggesting to Ryholt an adherence to this dynasty⁸². In contrast, Schneider mentions only two kings (Nehesy, *Mrj-df3-r^c*) that are otherwise attested on monuments⁸³.

The regional restriction of attested monuments with the name of Nehesy suggests that his realm was confined to the eastern Delta. According to M. Bietak's arguments these in all probability have to be dated to the middle of the 13th Dynasty and would thus represent the rival Dynasty 14 that is also suggested by Nehesy's position in the Turin Canon⁸⁴.

In addition, many more Semitic royal names are preserved than can be fitted into the 15th Dynasty and which, according to the Turin Canon, consisted of only six kings. For this reason it has become a tradition to attribute all objects with foreign names to the 14th Dynasty⁸⁵.

Again, it is a mere conjecture that the 14th Dynasty ended with the advent of the Hyksos kings attributed to the 15th Dynasty.

3.3 Dynasty 15 and king Khyan

By contrast to the above, the 15th Dynasty seems to stand on a firmer ground, although only two damaged lines in the Turin King List can be attributed to this dynasty with some confidence⁸⁶. A further fragment is placed here because the 40 + years mentioned can be best assigned to Apophis, as he is the only ruler from the whole period for whom at least 33 regnal years are attested⁸⁷.

It is regularly claimed that instead of the frequently used title *nzw-bjtj* the title *Hq3-H3s.wt* was used⁸⁸. The basis for this statement lies in the first preserved word in the summation line. The space before the royal names is, however, in no case preserved so that there is no reason to exclude the title *nzw-bjtj* beforehand. It is also possible that the word *Hq3-H3s.wt* from the summation line was used in another connection.

The title *Hq3-H3s.wt* appears next to scarabs also on a monumental doorway found at Tell el-Dab^ca where it precedes the royal name of *S-k-r-h-r* who is otherwise unattested⁸⁹. On the other hand, on scarabs the title is not only used for the so-called great Hyksos but also in connection with the »lesser« Hyksos attributed to the 16th resp. 14th Dynasty⁹⁰.

K. Ryholt argues that the early Hyksos »only gradually adopted royal titular« and preferred the title *Hq3-H3s.wt*⁹¹. Only with Khyan is the situation supposed to have changed, and he would have been the first one also using the title *z3-r^c*. This conjecture is taken as an argument that Yaqubher cannot be attributed to the 15th Dynasty, as he does not use the title *Hq3-H3s.wt*⁹². Considering that *S-k-r-h-r* is also mentioned with three names of the traditional Egyptian titulary (Horus name, Golden Falcon name and Two Ladies name) on the same monument, this argument is somehow strange.

The only preserved royal name on the Turin Canon is Khamudi who is not otherwise attested. As in a few other cases it is quite possible that this is his *nomen* and not his *prenomen*⁹³ – both of which are sometimes mentioned one following the other with the *nomen* not enclosed within a cartouche and without any title. Besides, Ryholt generally noticed an inconsistency in the use of

⁸² Ryholt 1997, 96–99; for king Nehesy see especially Bietak 1984.

⁸³ Schneider 2006, 169.

⁸⁴ Bietak 1984; more restrictive is Ben-Tor 2010, 105.

⁸⁵ Schneider 2006, 169; Ryholt 1997, 94. 99–102.

⁸⁶ Ryholt, 1997, 118.

⁸⁷ Ryholt 1997, 119.

⁸⁸ Ryholt 2004, 142; Ryholt 1997, 123–125; Schneider 1998, 41.

⁸⁹ See Bietak et al. 2002, 56–57 with older lit.; Schneider 1998, 40–43; Ryholt 1997, 119–127. 383.

⁹⁰ Ryholt 1997, 120–125. The attribution of the respective kings to the 16th Dynasty is done by scholars considering this dynasty as consisting of vassals situated in the northern part of Egypt which is in contrast to Ryholt's hypothesis that the dynasty has to be considered a predecessor of Theban's 17th Dynasty.

⁹¹ Ryholt 2010, 112; Ryholt 1997, 123–125.

⁹² Ryholt 2010, 112–113.

⁹³ Also proposed by Ryholt 1997, 18 n. 35.

the two names⁹⁴. Furthermore, only the *prenomen* is followed by the divine determinative, while the *nomen* has a seated man as determinative/classifier – which is also present after Khamudi's name. K. Ryholt also noted that this could be the king's *nomen* and proposed that the *prenomen* *Htp-ib-re* known from three scarabs – two from Jericho/Palestine and one without provenance – might be attributed to him⁹⁵. It would be rather inconsistent if only this group of kings was treated differently, especially with regard to the fact that neither rulers with foreign names are attributed to the 14th Dynasty nor are gods, semi-gods or spirits treated with titles other than the usual *nzw-bjtj*⁹⁶.

That Khyan should be attributed to the 15th Dynasty rather than any other dynasty of the SIP is based on the large amount of high quality monuments belonging to him. The works of art were, however, not produced by a group of specialised craftsmen of this period, but instead older royal statues, mainly from the 12th Dynasty, which were re-inscribed with the names of Hyksos kings⁹⁷. In most instances the Hyksos kings only added their names to those already present. Only in rare cases, such as a statue inscribed with the name of Khyan that was found at Bubastis, was the former name erased⁹⁸. There are also indications that the famous lion statue inscribed with the name of Khyan was changed in its appearance from the form of a sphinx⁹⁹. As Do. Arnold points out »one can hardly call the inscriptions on the so-called Hyksos monuments usurpations ... Properly characterized, these writings are graffiti, and as such their function can only be the ›I was here‹ claim left by travellers at visited sites and monuments.«¹⁰⁰. By taking this evidence into consideration the basis for the prominence and reign length of Khyan becomes rather small. Is it thus a mere coincidence that so many more high-quality monuments are preserved with Khyan's name than from other Hyksos kings? And can we still conclude that he reigned for about 30 years?

The great number of art objects is taken as an argument that Khyan should be placed close to Apophis for whom nearly the same number of sources is attested¹⁰¹. For this reason the 10 + x regnal years preserved in the Turin King List directly above the 40 years + x attributed to Apophis should be assigned to Khyan¹⁰². That his positioning inside the dynasty is highly subjective is, however, reflected by the different versions of the seriation of scarabs¹⁰³. Furthermore, to Ryholt the use of both titles, *Hq3-H3s.wt* as well as *z3-r*^{c104}, is one reason for not only attributing him to this Dynasty but also for positioning him directly before Apophis, as the latter is only attested with the title *z3-r*^{c105}. Both arguments are weak against the background that so little is preserved from this period in terms of inscribed monuments as well as names with regnal years in the Turin King List.

The interpretation of political events also stands on a very weak foundation. Thus the idea that Khyan sacked Upper Egypt is solely based on the find-spot of a very small column made of granite inscribed with his name at Gebelein¹⁰⁶. D. Polz recently made clear that the small dimension

⁹⁴ Ryholt 2004, 144.

⁹⁵ Ryholt 1997, 121.

⁹⁶ Ryholt 2004, 142 interprets this strange evidence for the kings of the 14th Dynasty as follows: »Curiously, however, the foreign extraction of the preceding 14th Dynasty seems to have been forgotten; it is, at any rate, not marked in any way.«

⁹⁷ Arnold 2010, 207–213.

⁹⁸ Arnold 2010, 207–208.

⁹⁹ Arnold 2010, 208.

¹⁰⁰ Arnold 2010, 208.

¹⁰¹ Among many others Ryholt 1997, 120. 201.

¹⁰² Ryholt 1997, 120.

¹⁰³ Ward 1984, 162–173; Krauss 1998; Ryholt 1997, 40–65; Ben-Tor et al. 1999; Ben-Tor – Bonfil 2002; Ben-Tor 2010. A critical view against a direct succession of Khyan – Apophis is also presented in Ilin-Tomich 2014, 151.

¹⁰⁴ The use of both titles on the same monument for Khyan is now attested on a sealing found in R/III at Tell el-Dab^a, see I. Forstner-Müller – C. Reali, this volume. Before this finding either of the two titles has been attested on a large variety of objects leading to the assumption that the change in the use of the titulary might signal a political change, Ryholt 1997, 123–124.

¹⁰⁵ Ryholt 1997, 119–120.

¹⁰⁶ Ryholt 1997, 135.

of this block and of an architrave with Apophis' name can by no means be taken as unequivocal proof for a Hyksos presence¹⁰⁷. In addition, diverse destruction reported to have occurred during the 17th Dynasty at Thebes and referred to by several officials without naming the initiator, are now attributed to Nubian raids in Upper Egypt¹⁰⁸. It was H. E. Winlock who connected these raids with Khyan and his proposition was accepted by K. Ryholt¹⁰⁹.

Several attempts to identify Hyksos names mentioned on contemporary monuments with those handed down in the epitomes of Manetho have been questioned¹¹⁰. The contradictory propositions show, however, that the reconstruction of Greek versions of personal names into the Egyptian originals, especially if they refer to foreign names, is not without problems. Thus, for instance, Ryholt favours the identification of Siaan in Josephus' version with Khyan¹¹¹, whereas this name is identified by Schneider with Yanassi-id who is mentioned on a stela found in Tell el-Dab^a and designated there as Khyan's son¹¹².

Thus, for the time being the stratigraphic attribution of Khyan's sealings found in recent excavations at Tell el-Dab^a¹¹³ and Tell Edfu¹¹⁴ are of paramount importance. But we still need further evidence from well-dated contexts and much more historical data about the other kings that can be unequivocally attributed to this Dynasty until we can answer the many open questions.

Another point lies in the length of the Hyksos Period. For a long time it was generally accepted that the number given in the summation within the Turin Canon after the Hyksos rulers should be reconstructed as 108 years. But Ryholt's re-examination makes a reading of 140 + x reasonable¹¹⁵. If this were correct, we would have to account for an overlap between the end of the 13th Dynasty and the beginning of the 15th Dynasty in order to avoid lengthening the whole period from the end of the 12th Dynasty to the beginning of the 18th Dynasty. For the Tell el-Dab^a sequence this would require an accommodation of 30 + years for the Hyksos Period and simultaneously a deduction of 30 years from the phases encompassing the 13th Dynasty.

3.4 Dynasty 16

As with the 14th Dynasty, the position and length of the 16th Dynasty are still a matter of debate, as is the extent of their realm. In past years many scholars followed a tradition based on Africanus' version of Manetho claiming the 16th Dynasty consisted of 32 kings who – like the 15th Dynasty – should be addressed as »shepherd kings«¹¹⁶. The adherence to this tradition implies a positioning of the 16th Dynasty in close connection with the 15th Dynasty (Hyksos) and thus an interpretation as a contemporaneous vassal kingdom of that Dynasty¹¹⁷. In consequence, objects giving foreign names that could not be accommodated within the six kings of the 15th Dynasty were attributed to this dynasty in addition to other kings with Egyptian names, attributed for iconographic reasons to the same group¹¹⁸. This seemed to be in accordance with the names given in the Turin Canon following the summation line of Dynasty 15, i.e. Ryholt's column 10,30 until 11,15. As here only throne-names/*prenomina* or parts of them are preserved, the identification with kings of Semitic origin is explained as a result of the different kinds of media (mainly scarabs) used. The difference

¹⁰⁷ Polz 2006.

¹⁰⁸ Davies 2010, 223 n. 2.

¹⁰⁹ Winlock 1947, 97. 99. 145–149; Ryholt 1997, 135–136. 304.

¹¹⁰ See for instance Ryholt 2010, 110–111; Schneider 2006, 192–194; Schneider 1998, 31–56.

¹¹¹ Ryholt 1997, 120–121.

¹¹² Ryholt 1997, 121; Schneider 1998, 53–54. 74. 112; Bietak et al. 2002, 57–58 with older literature.

¹¹³ I. Forstner-Müller – C. Reali, this volume.

¹¹⁴ N. Moeller – G. Marouard, same volume.

¹¹⁵ Personal communication by K. Ryholt; see Schneider 2006, 194 n. 126.

¹¹⁶ Waddell 1940, 93; Ryholt 1997, 151.

¹¹⁷ For instance Kitchen 2000, 45; von Beckerath 1997, 131. 136.

¹¹⁸ Ryholt 1997, 323–324 with further literature.

in the number of kings belonging to this dynasty – 32 in Africanus' version of Manetho versus 5 resp. 15 when emended in the Turin Canon – was explained by a missing column in the Canon¹¹⁹.

In contrast, Eusebius considered this dynasty as Theban, and encompassing only 5 kings¹²⁰. With his proposition in 1997 of considering the 16th Dynasty as the Theban predecessor of the 17th Dynasty, Ryholt not only preferred Eusebius' version but also a suggestion already made in 1947 by Winlock¹²¹. The most important reason was the connection of some kings to the Theban realm, clearly hinted at by contemporaneous sources. The other reason he put forward, however, i.e. the dating of the seals¹²², is not conclusive and is hotly debated¹²³. However, this proposition opened a new basis for discussing the nature and position of this dynasty, although it took, some time for this suggestion to start to take hold in the scientific community – and it is still not accepted by every scholar.

In all probability this dynasty consisted of the 15 kings in the upper part of column 11. The first half of them are attested by monuments, mainly from Upper Egypt, but some are found in Nubia¹²⁴. Only king Nebiryaw I is attested by two scarabs from Lisht¹²⁵. For a long time it was believed that these kings should be considered as vassal kings to the Hyksos in Middle Egypt and/or the Delta. Although Ryholt's scheme of considering the 16th Dynasty as an immediate predecessor of the 17th Dynasty in Thebes is increasingly taken into account by scholars, in most cases this is not explicitly stated in the chronological overviews of the archaeological data.

The prevalent problems with the attribution of archaeological material, even if inscribed with royal names, is reflected by the ongoing debates about the attribution of various kings to one or the other dynasties of this period¹²⁶.

In a recent analysis of the evidence of the 16th Dynasty A. Ilin-Tomich deduced that the administration of this dynasty directly emerged from that of the late Middle Kingdom at a time when the southern part of Egypt was already very strong¹²⁷. He furthermore concluded from the inscriptional evidence that this Dynasty not only struggled with the Nubians but also with the 13th Dynasty, who would not have liked a strong rival in the south, implying at the same time an overlap between the two dynasties¹²⁸.

3.5 Dynasty 17

It is not yet clear if the last group preserved on the papyrus should be identified with the kings of the 17th or the Abydos Dynasty¹²⁹. The most recent reconstruction with nine kings belonging to this dynasty was presented by D. Polz¹³⁰. There is no dispute about the last rulers having defeated the Hyksos.

¹¹⁹ Schneider 2008, 181–82; Schneider 1998, 123.

¹²⁰ Waddell 1940, 93.

¹²¹ Winlock 1947, 104–149.

¹²² Ryholt 1997, 324.

¹²³ Ben-Tor et al. 1999; Ben-Tor – Bonfil 2002; Ben-Tor 2010.

¹²⁴ Ryholt 1997, 162, 389.

¹²⁵ Ilin-Tomich 2014, 148; Bourriau 2010, 13; Ryholt 1997, 162, 389.

¹²⁶ See for instance the possibilities for the attribution of Sekhemra-shedtau Sobekemsaf to the SIP discussed by Franke 2010, 295–296.

¹²⁷ Ilin-Tomich 2014, 152–159.

¹²⁸ Ilin-Tomich 2014, 164–166.

¹²⁹ Ryholt 1997, 163; refuted by Ilin-Tomich 2014, 145–146.

¹³⁰ Polz 2007, 20–59.

4 Conclusion

Until new material can answer the many open questions concerning this period of intensive change, it is very desirable that scholars refer to the model that they choose to use. As recent discoveries show, every new excavation presents new and unexpected materials that often lead to more questions than solutions. But not only new excavations, but also the thorough evaluation of older excavations and data help immensely in clarifying problems.

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Daniel Polz

The Territorial Claim and the Political Role of the Theban State at the End of the Second Intermediate Period

A Case Study

The Vienna workshop on Khyan and the Second Intermediate Period (SIP) has re-opened a discussion on the internal chronology of the period in general, and the chronological position of individual rulers and their historical relationships within the period in particular. New archaeological evidence – especially from sites such as Tell el-Dab^a in the north-east of Egypt and Tell Edfu in the south – certainly justifies consideration of a possible earlier placement for the Hyksos Khyan. Although the evidence put forward from these two sites, as well as through other contributions at the workshop, seems to weigh heavily in favor of an earlier place in history for Khyan, the discussions during the workshop have – as was to be expected – not resulted in the unanimous acceptance of a new and distinctly earlier position for this ruler.

Until recently, Khyan and his two successors Apophis and Khamudi formed the last group of Hyksos at the very end of the SIP, making them contemporaries of the last kings of the 17th Dynasty¹. Objects inscribed with the names of Khyan and Apophis found in southern Upper Egypt have often been interpreted as proof of some kind of Hyksos control – if not domination – over that part of the country².

In the following, therefore, an outline of a political and historical map of the area during the late 17th Dynasty will be presented. Since, meanwhile, different scholarly opinions exist concerning the definition, chronological position and territorial coverage of dynasties during the SIP, it has to be made clear which of these one follows. In this paper, the 17th Dynasty is defined as a short ›Theban‹ dynasty³ which is, in principle, identical with the one reconstructed by Kim Ryholt, with certain differences⁴. For the purpose of this contribution, two of these differences must be highlighted:

- a) As a result of newly discovered objects and new interpretations of already known objects and structures, Ryholt's sequence of rulers of the 17th Dynasty should be altered at certain points as indicated in the list below⁵.
- b) Ryholt's ›re-creation‹ of a 16th (Theban) Dynasty *immediately* followed by a short 17th (Theban) Dynasty is certainly justified. His main argument⁶ for an hiatus between the two dynasties, i.e. the end of a Hyksos occupation in southern Upper Egypt, however lacks plausibility⁷.

¹ Ryholt 1997, 118–150.

² See the discussion in Polz 2006.

³ Polz 2007, 5–11 with tab. 1.

⁴ Ryholt 1997, 167–183. 265–281. 410 tab. 98. Cf. a most thorough and concise treatment of the chronologically extremely problematic period, Schneider 2006, 181–192.

⁵ Cf. Polz 2010, 20–59 and tab. 1 on p. 7; Schneider 2006, tab. on p. 90–91; for a slightly different view concerning the beginning of the dynasty see: Marée 2010.

⁶ Ryholt 1997, 143–148.

⁷ Schneider 2006, 183; Polz 2007, 8–11; cf. Allen 2010, 5.

The following sequence of rulers of the 17th Dynasty will be used as a basis for all relative-chronological arguments⁸:

Wah-Khau Rahotep
 Wadj-Khau Sobekemsaef
 Shed-Taui Sobekemsaef
 Sekhem-Ra Wep-Maat Intef
 Nub-Kheper-Ra Intef
 Heru-Her-Maat Intef
 Senakht-en-Ra *Ahmose*⁹
 Seqen-en-Ra Ta-aa
 Wadj-Kheper-Ra Kamose

The outline presented here is based mainly on the interpretation of objects or installations which can be clearly attributed to one particular king of this dynasty. The ruler in question is Nub-Kheper-Ra Intef, who is also the best attested king of this period – provided one takes only such objects and installations into consideration as sources which contain a minimum of solid contextual information¹⁰. With this precondition, the material evidence attributable to the reign of Nub-Kheper-Ra offers itself as a suitable basis for a case study.

On the east bank of Thebes, activities of Nub-Kheper-Ra are attested at Karnak – like those of a few other kings of the period – and quite obviously, Karnak never lost its theological importance throughout the SIP¹¹. Nub-Kheper-Ra erected a monumental stela there (fig. 1) the upper part of which was discovered in the early 20th century by Georges Legrain between the 3rd and 4th pylons of the temple of Ptah¹². In the decoration of this unusual stela, the king is represented in front of the three deities Amun-Ra, Mut, and Ptah. Like the last-mentioned god, the king himself is not depicted anthropomorphically, but is present only through what once was his complete royal name protocol written in exceptionally large hieroglyphs covering almost half of the upper round of the stela.

Furthermore, a fragment of a small stela (fig. 2) was unearthed in front of the 1st pylon at Karnak¹³. Given its dimensions it may well have been the stela of a private person donated during Nub-Kheper-Ra's reign. It should be kept in mind, however, that according to our present knowledge, the preserved architecture in/around the two above-mentioned find spots – the temple of Ptah and the ›tribune‹ in front of the 1st pylon of the main temple – did not exist at the time when the two objects were set up. One may assume, therefore, that all of the objects of SIP date found at Karnak were originally placed in pre-existing structures within the perimeters of the Middle Kingdom temple, i.e. within the wider area of the so-called Middle Kingdom Court. Alternatively, there could have been smaller, free standing sanctuaries or chapels in the area surrounding the main temple, similar to the chronologically slightly later chapels erected by Amenhotep I¹⁴. It is per-

⁸ In the current state of knowledge, it seems impossible to assign even a vague number of regnal years to specific kings and hence to the entire dynasty – none of these rulers' names can be identified on the last preserved page of the Turin King List (Ryholt 1997, 167; Schneider 2006, 181–183; Allen 2010, 3–4).

⁹ On the newly discovered personal name of this king see below, n. 11 and 14.

¹⁰ For objects and structures attributable to this ruler, see Polz 2007, 116–133 and 330–347; cf. Ryholt 1997, 167–183; especially 394–395.

¹¹ Polz 2007, 77–81. Even a comparatively well explored site like the vast area of the temple of Karnak can yield unexpected results concerning the sequence of Egyptian rulers at the time of the SIP: in the spring of 2012, the French-Egyptian mission discovered in the area surrounding the temple of Ptah blocks of a monumental gate, inscribed with parts of the royal titulary of king Senakht-en-Ra including his hitherto unknown personal name (see below, n. 14).

¹² Legrain 1902, 113–114; Polz 2007, 79–80 and 334 (with further bibliography) pl. 13 b.

¹³ Lauffray – Traunecker 1971, 139–140 fig. 39.

¹⁴ Cf. Graindorge 2002. In this context, the recent discovery of a fragmented lintel and an almost complete left jamb of a limestone gate of a granary (*sb3 n šnw:t*) in the Ptah temple area is of particular importance (Biston-Moulin 2012;



Fig. 1 Limestone stela of Nub-Kheper-Ra Intef from the temple of Ptah at Karnak (Cairo Temp. no. 20.6.28.11) (Photo: P. Windszus, © German Archaeological Institute Cairo)

1 
 2 
 3 
 4 



Fig 2 Fragment of a stela from the temple of Karnak (after: J. Lauf-
 fray – C. Traunecker, *Abords occidentaux du premier pylône*
 de Karnak. Le dromes, la tribune et les aménagements por-
 tuaires. Annexe épigraphique, in: *Kêmi* 21, 1971, 139 fig. 39)

Biston-Moulin et al. 2012). Both jamb and lintel are inscribed with the royal names of king Senakht-en-Ra *Ahmose*. They constitute the first contemporary evidence of this king who is otherwise only known through later so-called King Lists with his *prenomen* Senakht-en-Ra and varying personal names (see the most recent discussion in: Biston-Moulin 2012, 63–65). This granary may well have been (re- [?])installed by the king in connection with an already existing or a newly erected sanctuary at the site – an amazingly close parallel to a similar installation at Medamud, where, only a few decades earlier, another ruler of the 17th Dynasty, Sekhem-Re Wadj-Khau Sobekemsaef renewed the magazines or store-rooms of the Middle Kingdom temple and left a similar inscription with the name of a gate (*sb3 n šn^c*); cf. Eder 2002, 110–114; Polz 2007, 77).



Fig. 3 Decorated limestone block from the sanctuary of Nub-Kheper-Ra Intef in the temple of Min at Koptos (London UC 14780) (Courtesy of the Petrie Museum of Egyptian Archaeology, UCL)

haps noteworthy that Nub-Kheper-Ra shows up among the rulers depicted and mentioned in the Karnak ›King List‹ created during the reign of Thutmose III¹⁵.

About 40 km to the north of Thebes, in the temple of Min at Koptos¹⁶, numerous decorated limestone blocks discovered by William M. F. Petrie and James E. Quibell in 1893/1894 clearly indicate that Nub-Kheper-Ra erected a small sanctuary dedicated to the god Min of Koptos (fig. 3)¹⁷, close to the already existing larger temple of Amenemhat I and Senusret I¹⁸. Following a plausible reconstruction by Christian Eder, this sanctuary seems to have been an architecturally independent entity, a one room sanctuary-type building surrounded by two en-

closure walls (fig. 4)¹⁹. According to Petrie, the decorated fragments were found carefully buried below the pavement of a later building erected by Thutmose III, presumably at the same spot²⁰. From the find spot of the fragments it seems quite probable that the sanctuary was originally set up in front of the older Middle Kingdom temple.

In the latter temple, Nub-Kheper-Ra added one of the famous ›Koptos Decrees‹ on the inner side of a monumental limestone door-frame created during the reign of Senusret I²¹ (fig. 5). This royal decree dates to the king's third regnal year and contains a highly political text which orders the dismissal and replacement of a high official in the administration of the city of Koptos. The true grounds behind this royal action are not understood in detail²², but there are hints that could explain why it was deemed necessary to have it recorded at this prominent place in the doorway of the city's major temple: mentioned in the text of the stela, perhaps as beneficiary of the decree, is the »mayor of Koptos« (*h3tj-ʿn Gbtw*) Minemhat. As such, he would have been in charge of the control of what was perhaps the most important eastern desert track in Upper Egypt at that time. Starting from Koptos the track leads through the Wadi Hammamat and terminates in the wider area of the modern Red Sea port Quseir²³.

The mayor of Koptos Minemhat is also known from a small limestone stela found in a local sanctuary at the galena/lead-glance-mines of Gebel ez-Zeit on the Red Sea coast, some 230 km

¹⁵ As do other kings of the 17th Dynasty, e.g. Wildung 1979.

¹⁶ On the site of Koptos in general see now Pantalacci 2012.

¹⁷ I am grateful to Alice Stevenson (Petrie Museum of Egyptian Archaeology UCL) for granting me the permission to publish and providing the photograph in fig. 3.

¹⁸ Petrie 1896, 4–5. 9–10 with pls. 6–7; see Ryholt 1997, 394 (file 17/4 [4]); Eder 2002, 57–79; Polz 2007, 69–76 with figs. 15–18. 331–333; photographs of some of the blocks in the University College London in: Gabolde 2000, 40–41 (cat. 12); 67 (cat. 19).

¹⁹ Eder 2002, 57–79.

²⁰ The find spot of the blocks is labelled ›Antef slabs‹ on Petrie's plan in fig. 4.

²¹ Petrie 1896, 9–10; Polz 2007, 69–73. 331–333 (with further bibliography) pls. 12–13 a.

²² For a more recent interpretation, see Goebis 2003, 27–37.

²³ On the general economic importance of Koptos in connection with mines and quarries in the Eastern desert, see de Putter 2000.

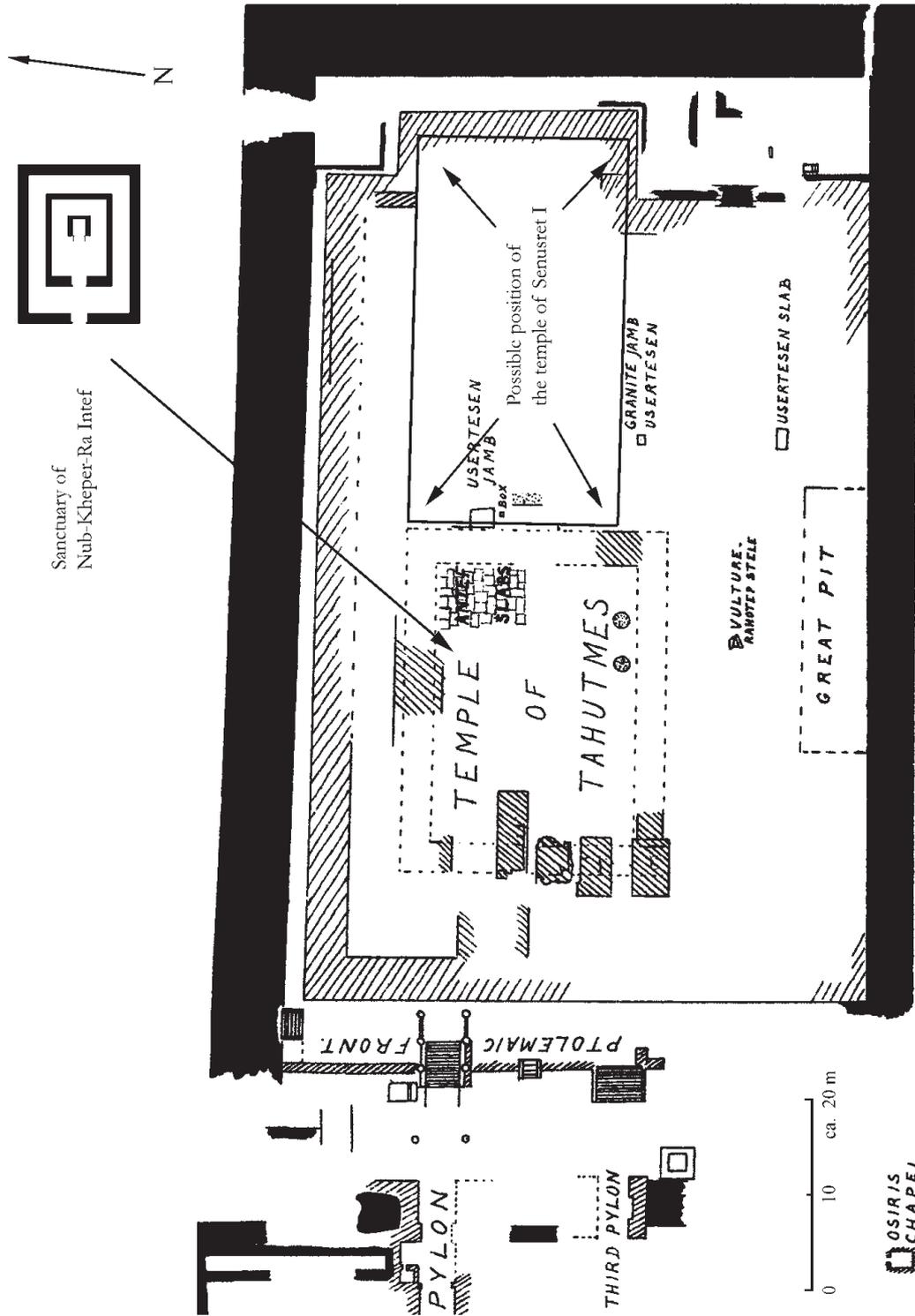


Fig. 4 Plan of the temple of Min at Koptos, showing the possible position of the chapel of Nub-Kheper-Ra Intef (after: Petrie 1896, pl. 1 and Eder 2002, pl. 40)



Fig. 5 The Koptos decree of Nub-Kheper-Ra Intef on a block from the Senusret I temple of Min at Koptos (Photo: P. Windszus, © German Archaeological Institute Cairo)

north of Quseir²⁴. On this stela, Minemhat is depicted adoring the deities Min and probably Hathor of Koptos (fig. 6). The intrinsic connection between the two localities Gebel ez-Zeit and Koptos, although separated by almost 400 km, seems evident. From the site of Gebel ez-Zeit comes a vast number of royal and non-royal objects, many of which can be dated with certainty. Based on these objects, one can safely conclude that the galena quarries were exploited from Middle Kingdom times (from the reign of Amenemhat III) through the SIP and well into the New Kingdom (as late as the reign of Ramses II²⁵). It should also be noted that, as is attested at least during Middle Kingdom times, Koptos housed one or more dockyards on the Nile. Here, seagoing ships seem to have been constructed in sections, and were then transported through the Wadi Hammamat²⁶. The ships would eventually be assembled in a harbour or a landing place (e.g. at Mersa/Wadi Gawasis²⁷) on the Red Sea coast.

Thus, controlling the roads to and from the Red Sea through the Wadi Hammamat was an essential political (since highly economically significant) factor and one need not be surprised that Nub-Kheper-Ra himself was involved in filling the position of the controller²⁸. In this context, the strong military presence in the text of Nub-Kheper-Ra's Koptos decree is hardly surprising: next to the mention of mayor Minemhat, a »king's son and troop commander of Koptos« (*z3 njswt tsw n Gbtjw*) and even the »entire army of Koptos« (*mš^c r dr=f n Gbtjw*) are listed as addressees of the king's decree²⁹.

Minemhat's title and name occur once more on a small wooden box (fig. 7). The object was part of a burial of the court official (*rh-njswt^c q*, »king's acquaintance [with right of] access«) Hor-

²⁴ Régen – Soukiassian 2008, 29–30 with pl. on 60; for differing interpretations of some of the royal objects from Gebel ez-Zeit, see Marée 2009.

²⁵ Régen – Soukiassian 2008, 48–54; Marée 2009, col. 147.

²⁶ Sayed 1977, 170 n. 18; Bard 2007, 250.

²⁷ Sayed 1999; Bard 2007, esp. 250–253.

²⁸ Although Katja Goebis, for example, arrives at a different interpretation of the decree's main purpose, she also thinks it possible »that one purpose or context of the Antef Decree was the assertion of royal authority in the Coptite nome« (Goebis 2003, 30 n. 16) – and beyond, one should add, in the light of the above discussion.

²⁹ Hieroglyphic transcription of the decree's text in: Miosi 1981, 30 figs. 5–8; cf. Polz 1998, 225–226.

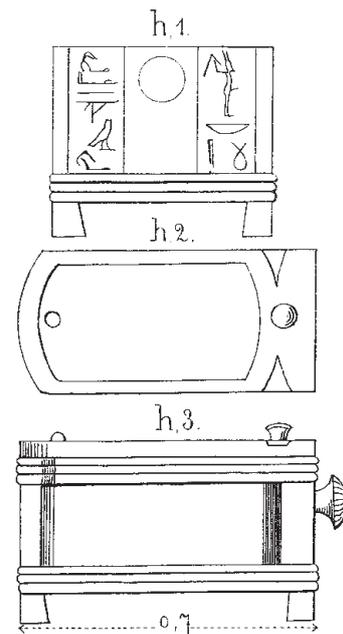
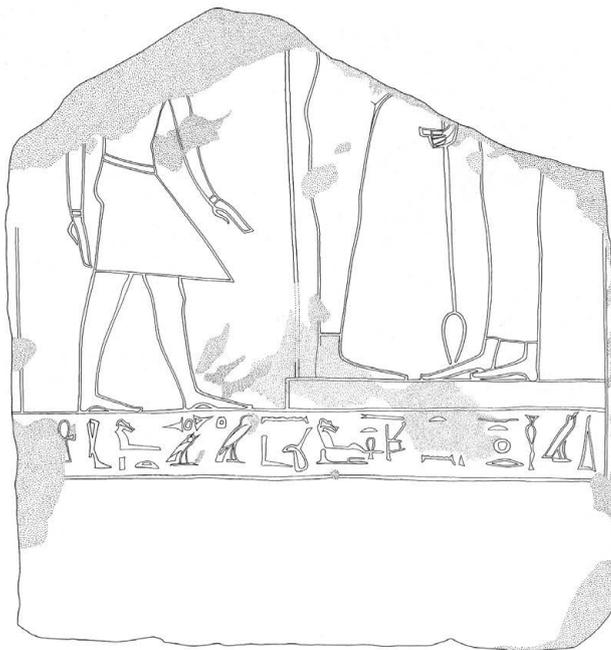


Fig. 7 Wooden box of the mayor of Koptos, Minemhat, from the tomb of the »king's acquaintance» Hornakht in Dra^c Abu el-Naga (after: A. Mariette-Pacha 1872, pl. 51)

Fig. 6 Fragment of a limestone stela of the mayor of Koptos, Minemhat, from the galena mines at Gebel ez-Zeit on the Red Sea coast (reprinted from: Régen – Soukiassian 2008, 60; © IFAO. Courtesy of the Institut français d'archéologie orientale)

nakht³⁰, which was discovered undisturbed by Luigi Vassalli in 1862/1863 at the northern end of the necropolis of Dra^c Abu el-Naga in Western Thebes. Hornakht's rishi-coffin and other objects of the accompanying burial equipment clearly support a dating of the whole burial to the very end of the SIP, placing Hornakht the same time³¹.

Further north, at Abydos, there is evidence of a substantial architectural and therefore, given the particular location, theological engagement during the time of Nub-Kheper-Ra. There must

³⁰ Tiradritti 2010, 336–340; note that in Marée's review of Régen – Soukiassian 2008 (Marée 2009, col. 161) Hornakht's tomb is wrongly attributed to a Sobeknakht with the same title.

³¹ Ryholt 1997, 174; Polz 2007, 42–45.

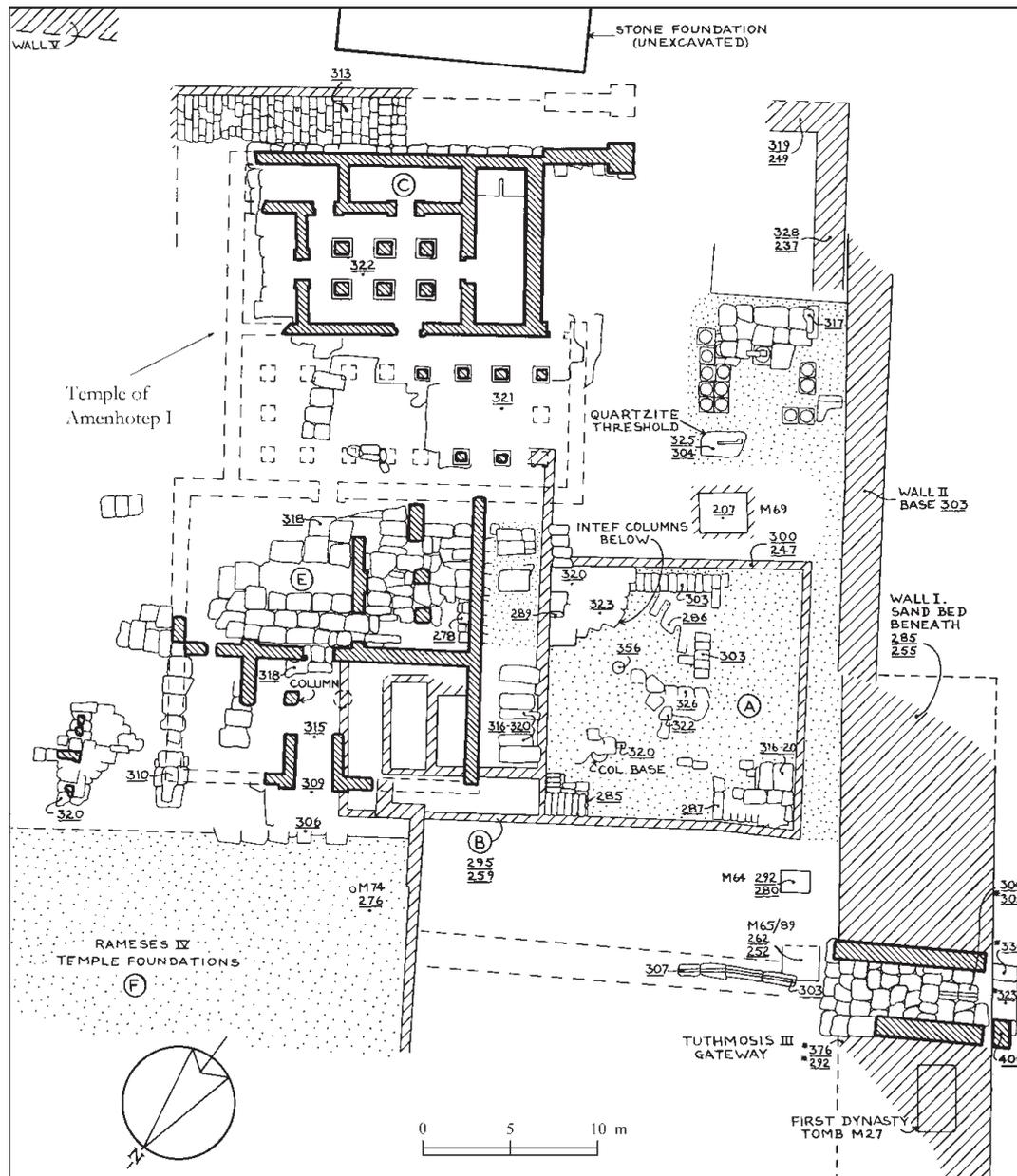


Fig. 8 Detail of Kemp's plan of the reconstructed temple of Osiris at Abydos (after: Kemp 1968, 138–155 fig. 1)

have existed a small temple or sanctuary in the Osiris temple area, at the very spot where Amenhotep I created a modest temple building (fig. 8). As Barry Kemp has convincingly demonstrated³², the remains of the sanctuary erected by Nub-Kheper-Ra were carefully buried beneath the floor of an adjacent building³³, where they were found by Petrie – an interesting parallel to the find spot of the chapel of Nub-Kheper-Ra in the precinct of the Middle Kingdom temple at Koptos mentioned above. The decoration of the existing fragments of Nub-Kheper-Ra's chapel in the Osiris temple area seems to point to a building in which he also paid tribute to his ancestors – as did Amenhotep I in his temple, and before him Neb-Pehtj-Ra Ahmose at his installations in southern Abydos. Somewhere in the same area of the Osiris temple, Petrie also discovered two fragmented limestone stelae which are remarkably similar in content and layout, and which depict and mention

³² Kemp 1968, 140–143 with fig. 1; Polz 2007, 101–104 with figs. 22–23.

³³ The finding spot is marked »Intef columns below« on Kemp's plan.

high officials following their king Nub-Kheper-Ra. Both stelae were most probably originally erected within or close to the chapel of the king. It is a noteworthy detail that in the text of the stela of the »king's son of the ruler Intef and troop-commander« (*z3 njswt n hq3 Jnj-jtj=f hrj pdt*) named Nakht³⁴ (fig. 9), this chapel is called *hwt Jnj-jtj=f m 3bdw* – »the temple of Intef at Abydos«³⁵.

On the other stela, a high official and »king's follower« is depicted behind the king (fig. 10)³⁶. He is the »sealer of the Upper Egyptian King, overseer of the sealers and follower of the king« (*htmtj bjtj jmj-r3 htmw šmsw njswt*) with the name Jahnefer. These two stelae and their find spot vividly demonstrate the status and qualifications of two individuals of the king's closest entourage at the administrative and military level.

Returning south to the West Bank of Thebes: from the northern part of the Theban Necropolis, several paths lead up to the Western Desert Plateau and terminate in what is known as the »Farshût Road«, a desert route cutting across the bend of the Nile between Erment/er-Rizeikat in the south and Nag Hammadi in the north³⁷. The Farshût Road runs between the two sites of (Western) Thebes and Hu (Diospolis parva) and shortens the distance between them from roughly 110 km by the river to about 50 km overland. Thus, depending on the time of the year and the respective strength of the wind, overland transport and messengers on donkeys (and, of course, also moving military personnel³⁸) using the

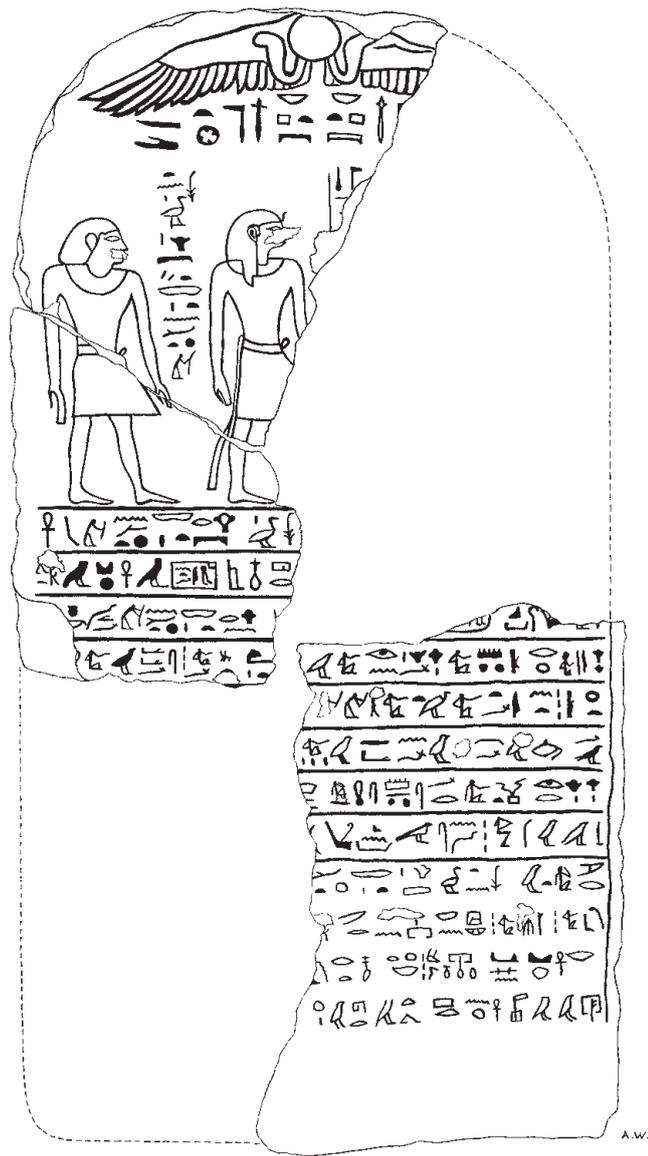


Fig. 9 Limestone stela of the »king's son, troop commander« Nakht from the temple of Nub-Kheper-Ra Intef at Abydos (after: W. M. F. Petrie, *Abydos 2*, EEF 24 [London 1903] pl. 57)

³⁴ Petrie 1903, pl. 57; Polz 2007, 345 fig. 104. For a recent transliteration, translation and commentary of the stela's texts, see Kubisch 2008, 162–165.

³⁵ Interestingly, the same name (without the toponym) also occurs partly and with a slightly different spelling in the text of the Ramesside Papyrus Harris 500 as the name of the building on whose walls the so-called (harper's) song of king Intef – the earliest known variant of the harpers' songs – is said to have been inscribed. For a concise overview of the main textual and chronological issues of the »harpers' songs«, including Jan Assmann's (partly modified) translation of the »song of king Intef« in pHarris 500, see Burkard – Thissen 2008, 96–98.

³⁶ Petrie 1903, 35 pl. 32 [3]; Polz 2007, pl. 11.

³⁷ Darnell 2002, 1–6 with maps on p. 4.

³⁸ As was already the case during the early 11th Dynasty (Darnell 2002, 30–46).



Fig. 10 Upper part of a limestone stele of the »king's follower« Jahnefer from the temple of Nub-Kheper-Ra Intef at Abydos (© University of Pennsylvania Museum, Philadelphia, E 16021; Courtesy Penn Museum, image #144048)

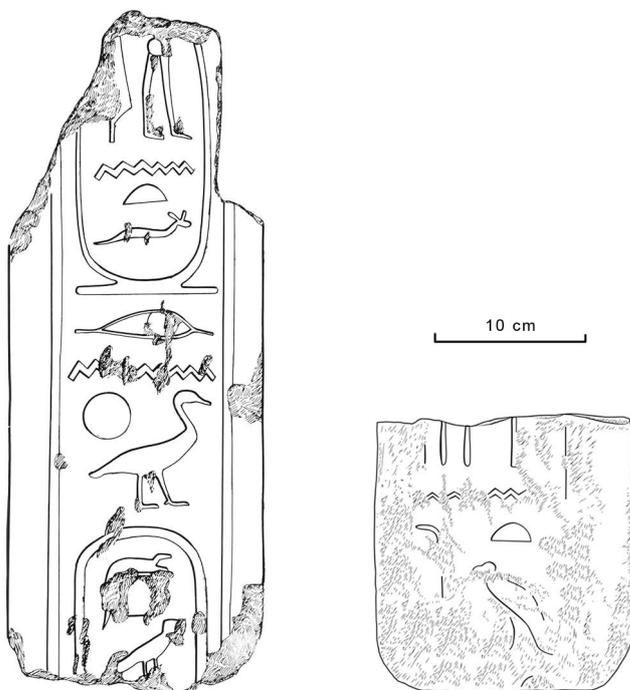


Fig. 11 Two fragments of door jambs from a chapel of Nub-Kheper-Ra Intef on the Farshût Road (drawings: J. C. Darnell – D. Darnell; inking left jamb: S. Osgood; right jamb: J. C. Darnell; Courtesy J. C. Darnell/D. Darnell)

desert track could have been much faster (and, if deemed necessary, more clandestine) than traveling by boat on the river Nile³⁹.

Somewhere close to the southern end of the Farshût Road, John and Deborah Darnell discovered in 1992 a number of decorated and inscribed sandstone blocks which they interpret as parts of »a small temple«. Two of these blocks are fragments of a door frame, each decorated with a single column of inscription (fig. 11)⁴⁰. While the left door-jamb's inscription contains the royal names of two kings, [Nub-Kheper-Ra] Intef and his father (*jr.n*) Sobekem[saef]⁴¹, the right one shows remains of an inscription which seems to have listed at least two of the royal titles of the king's mother (*/// ms.n mwt njswt [hm]t [njswt] ///*) – unfortu-

³⁹ On the speed per day of donkey caravans in the desert (»pony express«) and via ship on the Nile see, e.g., the respective remarks in Caminos 1963, 36–37; Darnell – Darnell 1997, 14; Darnell 2002, 139. Kuhlmann (2002, 139–140) discusses the issue of »calculation of distance by donkey-km per day« in general and arrives at a realistic average traveling speed of between 30 and 40 km/day. If one accepts this figure for the Farshût Road, a donkey (caravan) could cover the distance between Western Thebes and the area of Hu in far less than two days.

⁴⁰ I am particularly grateful to John C. Darnell and Deborah Darnell who not only gave me the permission to republish the left piece (cf. Polz 2007, 34–37 fig. 9), but also allowed me to publish here for the first time the right jamb with its historically important reference to Nub-Kheper-Ra's mother. John Darnell also provided the newly made drawing of the right jamb.

⁴¹ Darnell – Darnell 1993, 49–52 fig. 4; for a discussion of this filiation see Polz 2007, 34–38. Another sandstone block from a doorway of the same building (?) seems to be inscribed with a graffito mentioning the Horus name of Nub-Kheper-Ra Intef (unpublished, see Darnell 1997, 10).

nately her name is missing⁴². Besides the fact that these blocks play an important role in the discussion of the sequence of kings at the end of the 17th Dynasty⁴³, they also display the strategic importance which Nub-Kheper-Ra's administration assigned to this connection between key locations in the region.

It fits well into the picture drawn here that John and Deborah Darnell also discovered the lower half of a sandstone statue depicting a kneeling man at the same spot, the inscription on which strongly supports this interpretation. In the fragmented inscription in the middle of the lap the name of the depicted person is lost, but at least (one of [?]) his title(s) seems to be preserved: he held the office of a *z3 njsw.t n [ḥq3] nḥ.t*, »king's son of the victorious [ruler]«⁴⁴. It is, of course, by no means certain that the statue and its owner were actually contemporary with the erection and use of the chapel during the reign of Nub-Kheper-Ra Intef⁴⁵. The title, however, would fit well with the owners of the stela of Nub-Kheper-Ra's military officer Nakht from Abydos and the troop commander on the Koptos decree mentioned above. This king's son might well be another member of the king's military entourage at that time. Presumably, his statue was originally set up in Nub-Kheper-Ra's temple at a strategically important site: as in the case of the Wadi Hammamat in the eastern desert, one may safely assume that the one who controlled the southern end of this path through the western desert will also have controlled its northern end – and vice versa. In addition, only a few kilometers to the north-west of Nag Hammadi, another east-west track leads via Kharga to Dakhla Oasis, the latter being »a visibly important station along a south-bound desert path that bypassed the Nile Valley« since Old Kingdom times⁴⁶. And if one takes Kamose's claims on his Karnak stela at face value, it is most probable the Farshût Road (or a similar path from the Western Theban area) through which only a few decades later his troops entered the »oasis bypass« and intercepted a Hyksos messenger from Avaris on his way to Nubian territory.

In the necropolis of Dra^c Abu el-Naga at Western Thebes, the remains of a small mud-brick pyramid and its enclosure walls were discovered in 2001. The position of this building and the discovery of fragments of its limestone pyramidion (fig. 12) leave no doubt that it was erected by king Nub-Kheper-Ra. Almost equally important was the subsequent finding in the same area of a small fragment of yet another limestone pyramidion which can be joined to a larger piece in the British Museum London⁴⁷. It once crowned the pyramid of Nub-Kheper-Ra's elder brother and predecessor, Sekhem-Re Wepmaat Intef⁴⁸. Although neither the latter's pyramid nor the original burial place of either king can yet be identified, the presence of the two pyramids and the discovery of the kings' coffins in Dra^c Abu el-Naga in the early 19th century prove beyond doubt that this part of the Theban necropolis was the royal burial place at the time.

Immediately south of the enclosure wall of Nub-Kheper-Ra's pyramid lies the small chapel and burial shaft of Teti, one of the king's highest officials – given the privileged position of his funerary ensemble, one is tempted to say perhaps *the* highest official of the king at the time when his chapel was erected. On the southern side of the chapel's western wall are the remains of what

⁴² As John Darnell rightly suggested in our correspondence about the inscription on this piece (24.4.2015), the formal layout and contents of the inscription mentioning the king's mother are strikingly similar to one on one side of the pyramidion of Nub-Kheper-Ra's elder brother Sekhem-Ra Wep-Maat Intef in the British Museum in London (Polz 2007, 133–138 figs. 31–35 and pls. 19–20).

⁴³ Polz 2007, 34–37.

⁴⁴ Darnell – Darnell 1993, 51–52.

⁴⁵ Since no photograph or drawing of the fragment is published yet, it is not possible to ascertain its date. However, on the above mentioned stela of the official Nakht from Nub-Kheper-Ra's temple at Abydos, Nakht is also labelled [*z3 njswt n*] *ḥq3 Jnj-[it=f]* (line 3 of the horizontal text, see Kubisch 2008, 164). The designation *ḥq3 (nḥt)* used to be a common designation for rulers during the late SIP and the very early 18th Dynasty, although earlier examples are known (e.g., a *z3 njswt n ḥq3 nḥt*) of king Dedumose, presumably dating to the [Theban] 16th Dynasty, see Kubisch 2008, 200–203).

⁴⁶ Kuhlmann 2002, 138–139.

⁴⁷ Polz 2005, 242–245; Polz 2010, 115–138.

⁴⁸ On the sequence of the Intef kings see Polz 2010.



Fig. 12 Fragments of the limestone pyramidion of Nub-Kheper-Ra Intef from the king's pyramid at Dra' Abu el-Naga (Restoration: E. Peintner; photo: P. Windszus, © German Archaeological Institute Cairo)



Fig. 13 Decorated northern wall of the chapel of the court official Teti next to the pyramid of Nub-Kheper-Ra Intef at Dra' Abu el-Naga (Photo: D. Polz, © German Archaeological Institute Cairo)

once was an unusually large depiction of one of the royal names of Teti's master, Nub-Kheper-Ra⁴⁹. The painted decoration of the two other walls of the chapel show the owner of the tomb seated in front of an offering table (fig. 13). Above the scene on the northern wall are remains of an inscription in horizontal lines including *h̄tp-dj-njswt* formulae and sequences of Teti's titles. The latter consist of a classical Middle Kingdom style listing: *jrj-p^ct, h̄zjt-^c, h̄tmj-bjtj, smr w^ctj, jmj-r̄z h̄tmt* – »hereditary prince, count, seal-bearer of the king of Lower Egypt, sole companion, overseer of the seal«. It seems plausible that – in contrast to the combination of titles of Nub-Kheper-Ra's military and administrative personnel at Abydos, Koptos, and the Farshût Road mentioned above – here we probably have the head of Nub-Kheper-Ra's civil administration⁵⁰. In the debris within and around the chapel, a vast number of fragments of a limestone stela of Teti were unearthed, which was only recently and until now only partly reassembled. Teti's stela origi-

⁴⁹ Polz 2003, 10–14 with figs. 3–4 and pl. 1 b–c.

⁵⁰ For a recent overview of the development of the state's administration during the Theban 16th and 17th Dynasties, see Shirley 2013, 546–570.



Fig. 14 Sandstone stela of the priest Iuf from Edfu, mentioning queen Sobekemsaf (after: Lacau 1909, pl. 6 right)



Fig. 15 Fragment of a limestone stela from Tell Edfu, depicting queen Sobekemsaf (after: Engelbach 1922, pl. 1, 6)

nally displayed the conventional type of a round-topped stela with a decorated field in the upper part and a horizontally organized text field in the lower. Thus, it certainly once displayed the same general layout shown by the two above-mentioned stelae of the king's followers Jahnefer and Nakht from Abydos. The text of Teti's stela contained, among other elements, an autobiographical section as well as an »Anruf an die Lebenden«⁵¹. On a very small fragment belonging to the decorated upper field, the name of Teti's king, Nub-Kheper-Ra, is partly preserved.

Further south of Thebes, the presence of Nub-Kheper-Ra is less evident – the southernmost location in which events of his time have left any impression is the wider area of Edfu. From the necropolis there comes a stela of the priest Iuf (fig. 14), a contemporary of Thutmose I, who in his autobiographical text states that he was in charge of restoring the tomb of a queen Sobekemsaf (*sic!*)⁵². Given the unusual male form of her name, this queen should be identified with the wife of king Nub-Kheper-Ra⁵³. The queen is also mentioned with the same male name on another small stela fragment, apparently from the area of Tell Edfu (fig. 15), on which other members of the royal family are also depicted⁵⁴. We might, therefore, conclude that there must have existed a burial (or burials) of the royal family in the cemetery of Edfu during the reign of Nub-Kheper-Ra.

⁵¹ Polz (forthcoming a).

⁵² Bouriant 1887, 93; Lacau 1909, 16–17 pl. 6 (CG 34009); Urk. IV, 29–31; cf. Newberry 1902, 285–286. Naturally, one wonders why the tomb of a royal wife was found to be in ruins only some decades after its erection and one is inclined to see a connection with a historical event mentioned in an inscription in one of the tombs of Elkab (see further down and n. 65–66).

⁵³ Explicitly as spouse of Nub-Kheper-Ra the queen is so far known only from two silver spacers in the British Museum with a somewhat doubtful history, cf. Polz 2007, 38–42.

⁵⁴ Engelbach 1922, 116 pl. 1 [6] (JE 16.2.22.23).

As was noted above, the statement of family ties in the inscriptions of royal monuments and objects (the two pyramids, the door jambs of a chapel on the Farshût Road, the coffin lid of Sekhem-Ra Wep-Maat) seems to have played a vital role at that time, which might foreshadow the importance of royal wives and mothers (Tetisheri, Ahhotep, Ahmes-Nefertari) only slightly later under the rulers Seqen-en-Ra, Ahmose and Amenhotep I. The area of Elkab/Edfu has long been known to contain burials and tombs of local high officials during the SIP and in recent years, the epigraphic project of the British Museum has yielded substantial new historical and epigraphic data on the period⁵⁵. It seems plausible to assume that the ancestors⁵⁶ of Nub-Kheper-Ra Intef originally came from two different families – one from the Theban area, and the other from the Edfu area.

To the south of Edfu there are no clear attestations of king Nub-Kheper-Ra or, indeed, of any other king of the 17th Dynasty – except for a somewhat doubtfully provenanced statue of king Sekhem-Ra Wadj-Khau Sobekemsaef on Elephantine island⁵⁷. In addition, during an intensive survey conducted over the past years by Linda Borrmann, Anita Kriener and Stephan Seidlmayer on the rock inscriptions in the wider Assuan area, among over 1,500 texts (of which approximately 500 were newly found or identified) there is not a single one which can be securely dated to this dynasty⁵⁸. A long known but only recently published stamp seal from Elephantine which obviously displays the hieroglyphic signs of a »ruler of Kush« written in a »pharaonic« name-ring, seems – at first glance – to support the interpretation that the southernmost part of Egypt was no longer under the control of the rulers of the 17th Dynasty. However, the uniqueness of the object and its find spot seem to rule out any far-reaching historical or political interpretation at the present time⁵⁹.

On the basis of this case study and additional material which cannot be discussed here⁶⁰, I would like to attempt a somewhat more synthetic review of the political *status quo* at the end of the SIP in Upper Egypt. During the reign of Nub-Kheper-Ra there are clear indications of a fully functional state on the political, economic, and administrative levels, including provisions and logistics; an obviously partly reorganized military force (the »king's sons«, the »entire army of Koptos«⁶¹) secured the routes necessary for the development and utilization of resources and presumably also long-range trade (the oases, eastern desert, and the Red Sea coast).

The Upper Egyptian rump state at the time was clearly a regional player. Its size was territorially limited and its means and claims are certainly not to be compared with advanced forms of state in Middle or New Kingdom times. But one should not underestimate the size of this political entity, stretching at least from Edfu in the south to Abydos in the north, including vital areas in the Eastern desert and the Red Sea shore and certain territories of the western desert – this is, after all, an area covering almost a third of the country (fig. 16). However, even the foundations of such a rump state could not have been developed during the reigns of just one or two rulers. There must have been preceding phases during which the structural basics were prepared, and these would have been developed during the reigns of Nub-Kheper-Ra's predecessor and brother Sekhem-Ra Wep-Maat Intef and the two Sebekemsaef kings, all of whose activities are well attested⁶².

With the scenario just described, the suggestion that southern Upper Egypt was controlled or dominated by the Hyksos rulers at the end of the SIP seems to be extremely difficult to maintain. This does not exclude a Hyksos presence of some form at that time (and/or earlier), be it through

⁵⁵ Davies 2003; Davies 2010.

⁵⁶ Apparently, the unknown mother of Nub-Kheper-Ra and his brother Sekhem-Ra Wep-Maat was not only »king's mother« but also »king's great wife« (cf. above and n. 42).

⁵⁷ Habachi 1985, 116 pls. 206–207; Seidl 1996, 119 with n. 179; cf. Polz 2007, 90–91.

⁵⁸ Personal communication Linda Borrmann, January 2015. On the project in general, see Borrmann 2014.

⁵⁹ The object was published twice within a year (Fitzenteiler 2014; von Pilgrim 2015). Obviously, the authors encounter some difficulties in interpreting its historical and/or political implications. Both agree, however – on different grounds – that the stamp seal should be dated to within a relatively short time frame, somewhere between the end of the SIP and the very early New Kingdom. While its find spot seems to be more or less securely datable (von Pilgrim 2015, 217) – its original date of manufacture, usage, and discard, cannot, of course, be easily fixed chronologically.

⁶⁰ Polz (forthcoming b).

⁶¹ The term could point to a »standing army« being garrisoned permanently in Koptos, see Spalinger 2013, 434–435.

⁶² Polz 2007, 61–95.

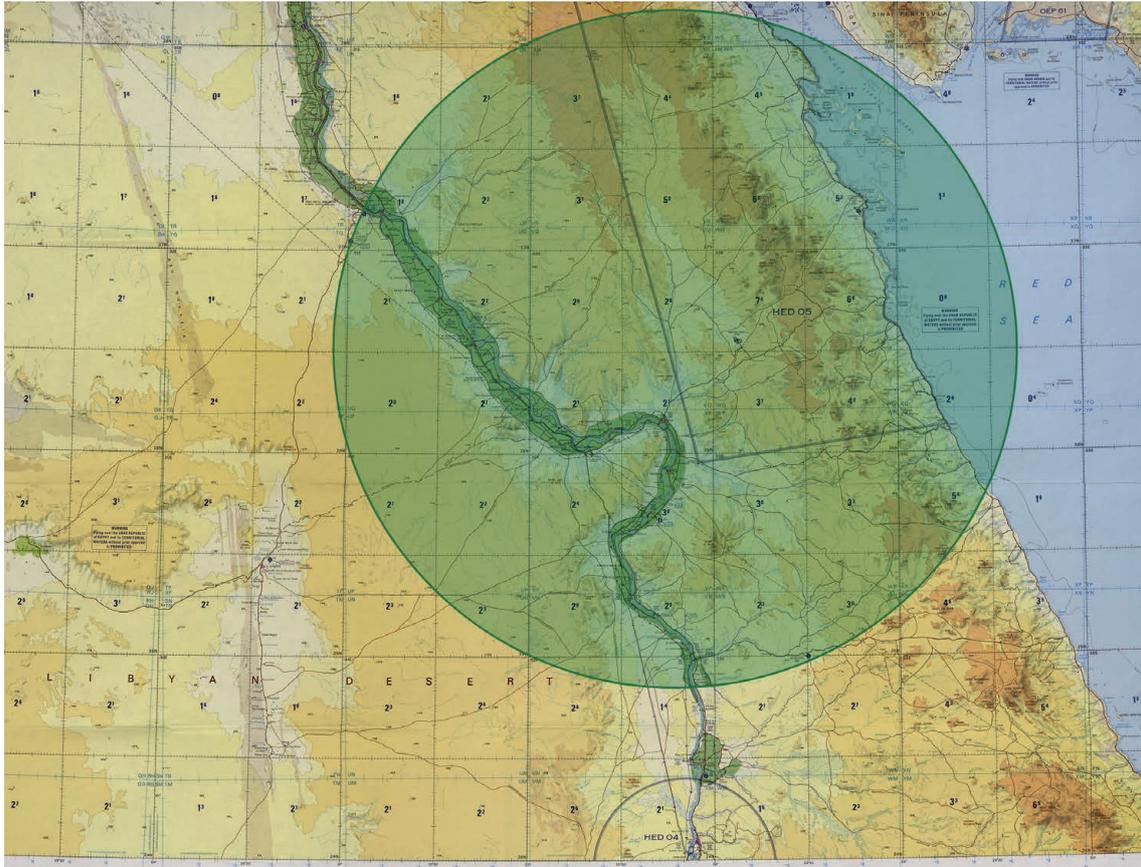


Fig. 16 Map of southern Upper Egypt; the green circle indicates the possible territorial claim of the Theban rulers around the time of Nub-Kheper-Ra Intef (detail of: Tactical Pilotage Chart, sheet H-5D, edition 5-GSGS; Copyright © HMSO London 1981)

trade or other economic relations⁶³. The evidence of the objects inscribed with titles and names of Hyksos rulers found in Upper Egypt (at Luxor and Gebelên) does not weigh heavily enough to change the picture⁶⁴.

On the other hand, and in view of the recently recovered tomb inscriptions from Elkab, the scenario would leave space for the insertion of another historical event, namely an obviously hostile military action of Nubian forces into southern Upper Egypt⁶⁵. As demonstrated above, in the archaeological and epigraphic material there are no indications that the area south of Edfu was part of the territory claimed during the reign of Nub-Kheper-Ra Intef and, indeed, there is none until the end of the 17th Dynasty. An advance of Nubian troops from the south would, therefore, not have met with substantial resistance – it could only be stopped at the then southern border of the territory of the Theban state in the Edfu area⁶⁶.

⁶³ As the Khyan seal impressions from Tell Edfu suggest, see the contributions of N. Moeller – G. Marouard and I. Forstner-Müller – C. Reali, present volume.

⁶⁴ Polz 2006.

⁶⁵ Davies 2003; Davies 2010. For the respective passages of the biographical text in the tomb of the governor of Elkab Sobeknakht, see Davies 2003, 6.

⁶⁶ One may, however, ask exactly how large a force these Nubian troops comprised and who they were. Sobeknakht's inscription seems to indicate a huge allied force (including Kush, Wawat, Punt, and even Medjau), but this statement could be exaggerated. In any case, it would be in stark contrast to the noticeable presence of Egyptians (including military personnel) at Buhen during the end of the SIP, some of whom officially served the »ruler of Kush« (Kubisch 2008, 86–88 and 166–178). On palaeographic grounds (the inverted *j^h*-sign, see the discussion in Polz 2007, 14–20), at least three stelae of these officials from Buhen can be dated to the period between the reigns of Nub-Kheper-Ra Intef and Ahmose (stelae »Buhen 1«, »Buhen 2«, and »Buhen 5«, in: Kubisch 2007, 86–88, 166–178), which would make their donors contemporaries of Sobeknakht and the »Nubian incident«.

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Kim Ryholt

Seals and History of the 14th and 15th Dynasties*

Seals form a central source for the history of the 14th and 15th Dynasties, a period lasting perhaps around two centuries and ending in the mid-16th century B.C. With only a few kings and officials attested by actual monuments and no surviving administrative documents, the seals represent the bulk of the historical (as opposed to archaeological or non-epigraphical) sources¹. As such they are used both for the dating of specific archaeological contexts and for the study of the contemporary administration. A crucial problem in relation to the seals is the fact that most of them are inscribed for kings and high officials whose historical position and order does not emerge from any other published sources.

The present study presents a comprehensive, statistical seriation of seal typology based on a database comprising more than one thousand items. It is argued that it is possible to identify a consistent typological development, according to which the seals in question may be arranged in a chronological sequence, and that the distinct typological features of the seals reflect a centralized production, in effect the existence of a royal workshop. Proceeding from a seriation of seals inscribed for kings, it is possible also to assign relative dates to a large number of seals inscribed for members of the royal family and high officials, and to place these individuals in a more specific historical context. The seriation of these seals and their dating, in turn, allow for a number of observations concerning the political history of the 14th and 15th Dynasties.

The present paper forms part of a larger investigation which, for practical reasons, has been divided into three contributions. The other two contributions are currently in preparation. One presents a discussion of the archaeological contexts in which a number of the seals here studied were found, together with the chronological and historical implications. The other presents a seriation of seals pertaining to kings and high officials of the 13th Dynasty; the distinct typological features of these seals similarly indicate the existence of a centralized production.

1 Problem

The 14th and 15th Dynasties, both based in the north of Egypt, within the Delta, rank among the most obscure in Egyptian history as far as textual sources are concerned. Numerous kings are known, but only six of them are attested by inscribed monuments and, among these, just three are attested by more than a single object². There is also a dearth of monuments relating to officials, and no administrative documents survive. Apart from the few royal monuments, the main body of contemporary textual sources is the large group of seals inscribed with the names of kings, royal

* As always, many thanks are due to Cary Martin for checking my English.

¹ The actual use of the seals will not be discussed in the present paper. Let it suffice to be stated that the notion that most of the royal and private-name scarabs of the Second Intermediate Period were amuletic in function rather than seals, of which D. Ben-Tor is the primary proponent, has been effectively refuted by Wegner 2001, 93–97; cf. also von Pilgrim 2001, 161. Some tens of thousands of seal-impressions from scarab-shaped seals have by now been excavated in Egypt and Nubia.

² For a general overview of the sources relating to the kings of the 14th and 15th Dynasties, see Ryholt 1997, 94–150. 359–388. Nehsy, Khyan, and Apophis (pp. 376–378. 383–387) are attested by several monuments, while Merdjefare, Nebsenire, and Sekar-Har (pp. 379. 383) are attested by a single object each.

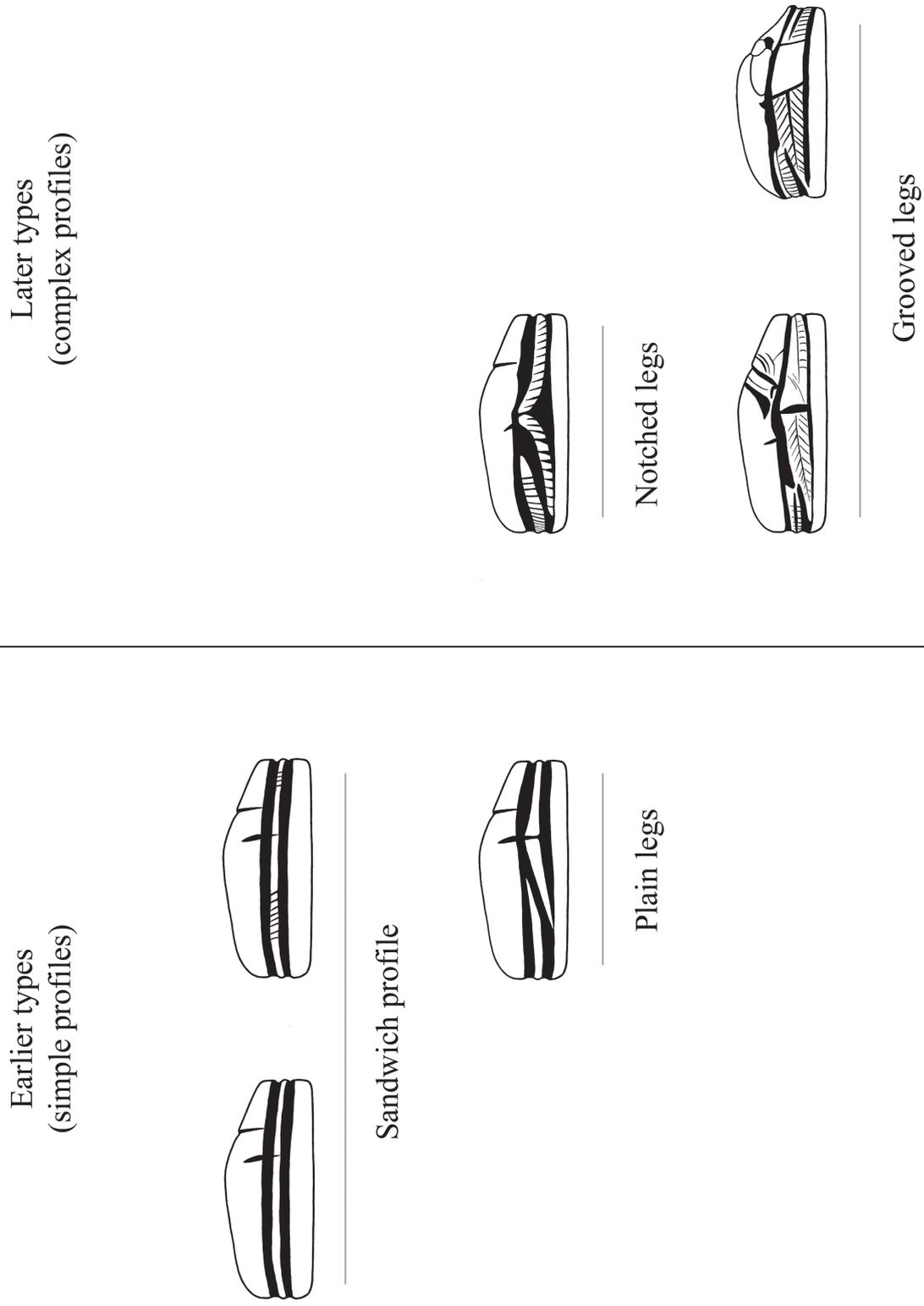


Fig. 1 Examples of the common profile types (© K. Ryholt)

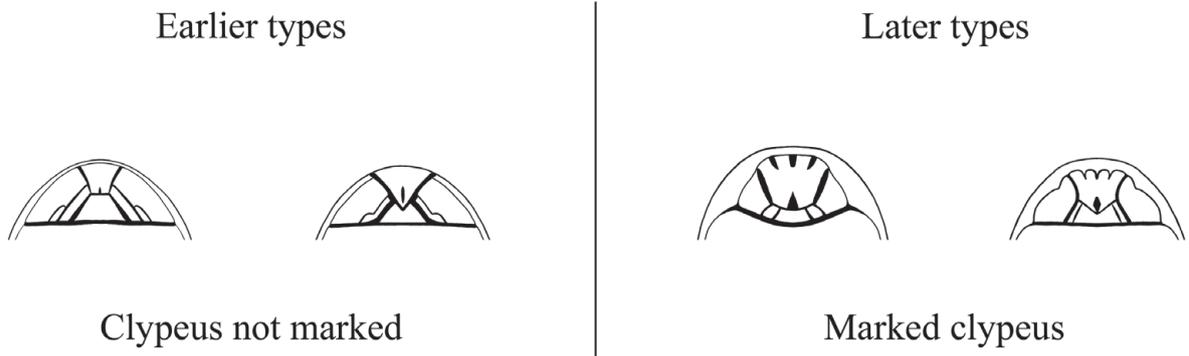


Fig. 2 Examples of the common head types (© K. Ryholt)

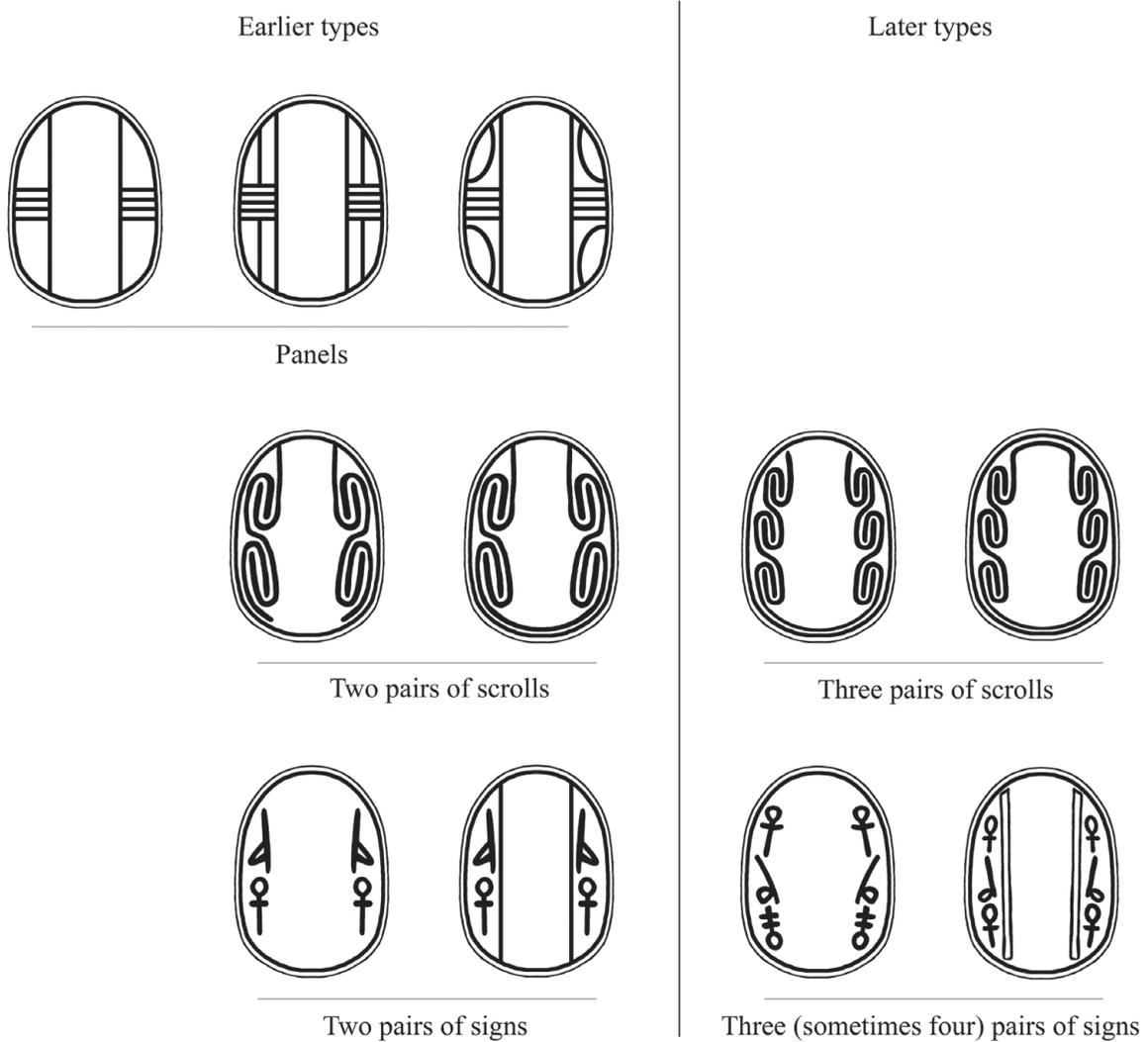


Fig. 3 Examples of the common decoration of the base (© K. Ryholt)

family members, and high officials, the latter almost exclusively consisting of treasurers. Hence seals play a much more crucial role for the understanding of the history of the 14th and 15th Dynasties than for any other period of Egyptian history.

Most of the individuals documented by the seals are not otherwise attested. Besides providing us with the names of kings and officials, which adds to the limited onomastic record, the typology of the seals offers a potential dating criterion on the basis of which the individuals in question may be placed within a historical context. Aspects of the seals, such as the use of various royal attributes, shed light on contemporary kingship. Moreover, the seals represent both a marker of status and an administrative device, and accordingly provide information about the hierarchy of authority and aspects of administration.

The main challenge posed by the seals is the question of their date, both in relation to one another, in relation to the contemporary Egyptian kings in the Nile Valley to the south, and in relation to the stratigraphy of specific sites and other archaeological contexts. Independent evidence for the date of the individual kings is so far extremely limited, which complicates the dating of specific typological features. Apophis is known to belong to the late 15th Dynasty and to have been contemporary with Seqenenre, Kamose, and Ahmose of the late 17th and early 18th Dynasties, and Khyan can be ascribed to the early 15th Dynasty³. The names of two further kings, Nehsy and Sekheperenre, are preserved in the 14th Dynasty section of the Turin King List from the Ramesside period, but their relation to the better attested kings does not emerge clearly from the surviving fragments of the document⁴. Little information is available concerning the date of the remaining kings, apart from what may be learned from the seals.

A further challenge is the fact that each king issued what was effectively two series of seals, one inscribed with his throne name (the so-called *prenomen*) and another inscribed with his personal name (the *nomen*). It is exceptionally rare to find both names used together on seals, and I can cite just two examples out of 700 royal name seals; one pertaining to Meruserre Ya^cqub-Har⁵ and the other to Auserre Apophis⁶. The combination Auserre Apophis is also attested on monuments, as are the combinations Asehre Nehsy and Seuserenre Khyan, two other rulers who are similarly attested by seals. As for the remaining names that occur on royal name seals of the 14th and 15th Dynasties, there are no direct sources to indicate which ones should be coupled and represent the same kings.

The actual use of the scarab-shaped seals as administrative devices will not be discussed in the present paper. This aspect has been studied in detail elsewhere on the basis of the tens of thousands of sealings with impressions from Late Middle Kingdom and Second Intermediate Period seals that have by now been excavated in Egypt and Nubia⁷. These studies have also effectively refuted the re-interpretation of name-scarabs as primarily amuletic objects, according to which the royal ones were assumed to have provided some kind of magical protection to their owners and those with the names of officials to have represented some form of tomb offerings⁸.

2 Hypothesis

The present study is based on a two-part hypothesis. Firstly, that a sufficiently large sample of seals, displaying a broad range of distinct typological features, will reflect a centralized production and a common workshop or workshop tradition. Secondly, that if these seals can be arranged

³ For the date of Khyan, see now Moeller et al. 2011.

⁴ For the King List in general, see Ryholt 2004. The 14th Dynasty section is discussed in Ryholt 1997, 94–96.

⁵ Newberry 1906, 151 pl. 22, 27.

⁶ Ägyptisches Museum Berlin, inv. 32722 (unpublished, personal examination).

⁷ Esp. various articles in: Cahiers de recherches de l'Institut de Papyrologie et d'Égyptologie de Lille 22 (2001); above all Foster 2001; Gratién 2001; Wegner 2001; von Pilgrim 2001; Smith 2001. See further Smith 1990; Wegner 2004; Wegner 2010.

⁸ Ben-Tor 1993, 16; Ben-Tor 1995, 81–92; cf. also Ben-Tor 1994, 7–22; Ben-Tor 2003, 239–248; Ben-Tor 2004, 1–6.

in a sequence that displays a gradual and consistent development, again based on a range of typological features, this arrangement will reflect and indicate their relative chronological order.

3 Database

3.1 Inclusions

The empirical data is drawn from a database of seals of the Second Intermediate Period and reflects its status as of February 2015⁹. The section of the database that concerns kings, royal family members, and high officials attributed to the 14th and 15th Dynasty comprises 1,043 individual items, 991 of which form the basis of the following analysis¹⁰. An overview of the seals is presented in tables 1–6. The arrangement and dating of the kings in the first three tables anticipates the conclusions of the present study for practical reasons, but the tables are sufficiently detailed that the reader will easily find the necessary information, should the conclusions require modification. It remains to be noted that all the seals are scarab-shaped; the authenticity of a few cylinder seals inscribed with the names of kings of the 14th and 15th Dynasties remains doubtful¹¹.

3.2 Exclusions

Around 50 seals in the database are not included in the analysis. A few appear to contain royal names, but without any royal attributes (sc. titles, cartouche, epithets). The remainder have garbled or otherwise difficult inscriptions (some of them seem to preserve names of hitherto unattested kings), or there is reason to believe they represent modern fakes. I also exclude a number of seals which, in my view, have been incorrectly ascribed to Apophis; these seals contain the words *r^c*, *ꜥ*, and *wsr* within a cartouche, but do not include royal titles or epithets, and they display typological attributes quite distinct from the seals here under discussion¹².

3.3 Ghost entries

The database is likely to include a limited number of ghost entries relating to seals formerly or currently in private collections. Some of these seals have been published more than once and while in different ownership, and in cases where their modern history is unknown or unavailable, they risk being counted more than once. I have cleared up a number of ghost entries both in the dossier published many years ago in my thesis and in other publications. I have also had the opportunity to correct, either through access to the actual objects or to images, the attribution of a relatively limited number of unpublished seals where the names had previously been misidentified.

⁹ For the purposes of the present paper, the term seal should be understood also to include seal-impressions.

¹⁰ It is naturally not possible to make reference to about one thousand seals in the present context. The majority of the royal name seals are listed in the catalogue of attestations published in Ryholt 1997, 359–388; cf. further pp. 53–60 for seals of royal family members and treasurers.

¹¹ A single cylinder seal is inscribed with the name of Yakbim and another four with that of Khyan. None of them has a recorded archaeological context. The inscription of the Yakbim cylinder (Petrie Museum, inv. 11816) is completely identical to a seal formerly in the private collections of R. H. Blanchard and G. A. Michaelidis and now in the Ägyptisches Museum Berlin, inv. 32757 (unpublished, personal examination), even reproducing the reversed initial *y*- and reducing the *b* to a horizontal stroke. The cylinder seal is published by Petrie 1925, pl. 24, 16.H.7. Three cylinder seals are inscribed for Khyan as a Hyksos: Martin 1971, nos. 1169, 1180, and 1181. In each case the inscriptions are garbled and they were evidently copied by someone unfamiliar with the script, whether in antiquity or modern times. A fifth cylinder seal is inscribed for Khyan as a king: Newberry 1906, 47 fig. 23. The inscription itself is faultless, but it could easily have been copied from a scarab-shaped seal and the decoration finds no parallels among other seals of Khyan or other kings.

¹² Ryholt 1997, 64; cf. also Ben-Tor et al. 1999, 64–65, who prefer to interpret these seals as royal. I hope to discuss them in more detail in a forthcoming paper.

Table 1 Seals of kings of the 14th Dynasty, main sequence

Kings – 14 th Dynasty		
Ya ^c ammu	Nomen <i>y^cmw</i>	6
	Prenomen <i>sh^c-n-r^c</i>	95
Yakbim	Nomen <i>ykbmw</i>	22
	Prenomen <i>ʒ-htp-r^c</i>	29
Qareh	Nomen <i>kʒrh</i>	8
	Prenomen <i>nbw-wsr-r^c</i>	16
^c Ammu	Nomen <i>ʒmw</i>	27
	Prenomen <i>h^c-wsr-r^c</i>	17
Sheshi	Nomen <i>ššī</i>	238
	Prenomen <i>mʒ^c-ib-r^c</i>	152
Ya ^c qub-Har	Nomen <i>y^ckb-hr</i>	16
	Prenomen <i>mr-wsr-r^c</i>	12
	<i>mr-wsr-r^c</i> and <i>y^ckb-hr</i> together	1
Total		639

Table 2 Seals of kings of the 15th Dynasty, main sequence

Kings – 15 th Dynasty		
Khyan	Hyksos <i>hyʒn</i>	18
	Nomen <i>hyʒn</i>	14
	Prenomen <i>swsr-n-r^c</i>	3
Apophis	Nomen <i>ipp / ippi</i>	4
	Prenomen <i>ʒ-wsr-r^c</i>	6
	<i>ippi</i> and <i>ʒ-wsr-r^c</i> together	1
Total		46

Table 3 Seals of kings, supplementary series

Kings – 14 th Dynasty		
Khamure	Prenomen <i>h^c-mw-r^c</i>	3
Nehsy	Nomen <i>nhsy</i>	2
Sekheperenre	Prenomen <i>shpr-n-r^c</i>	1
Shenes	Nomen <i>šns</i>	3
Shenshek	Nomen <i>šnšk</i>	1
Wadjed	Nomen <i>wʒdd</i>	5
Total		15

Table 4 Seals of king's sons

Kings' sons		
Apophis A+B	<i>ipp / ippi</i>	5
Ili-Milku	<i>ir-mrkw</i>	1
Ipqu	<i>ipk</i>	46
Nebnetjeru	<i>nb-ntr:w</i>	1
Nehsy	<i>nhsy</i>	22
Quppen	<i>kwppn</i>	11
Seket	<i>skt</i>	7
Yakbim	<i>ykbm</i>	2
Ysrym	<i>ysrym</i>	1
Total		96

Table 5 Seals of queens

Queens		
Tati	<i>t3-ti</i>	11

Table 6 Seals of treasurers

Treasurers		
»Geba«	<i>gb3 (?)</i>	1
Har	<i>h3r</i>	133
Ibta	<i>ibt</i>	3
Peremhesut	<i>pr-m-hst</i>	35
Rediha	<i>rdi-h3</i>	10
»Sadi«	<i>s3di (?)</i>	2
Total		184

4 Methodology and sources of error

The approach here adopted is similar to that undertaken by William A. Ward in the first larger, systematic study of Second Intermediate Period scarab-shaped seals from 1984¹³. The first step of the investigation is the establishment of a statistical, typological seriation of the seals of the better attested kings. This seriation is referred to as the »main sequence«. It should be emphasized that the main sequence does not indicate a direct succession, merely the relative chronological order of the kings in question. In several cases there is reason to believe that other, less well-attested kings ruled between the kings that make up the main sequence. The second step is to use the main sequence as a chronological framework for the dating of the seals of the less well-attested kings, as well as members of the royal family and high officials.

For the discussion of various attributes and their chronological and historical implications, reference to percentages alone would be misleading and unsatisfactory, since the number of seals relating to specific individuals is often relatively limited. In the seriation tables, percentages are therefore always followed by the actual number of occurrences as well as the number of seals that have been examined. Thus 7/9 means that nine seals have been examined and that the attribute in question occurs on seven of them. Figures in percentage are consistently rounded off, since reference to fractions seems pointless when dealing with limited quantities. A number of uncommon attributes are omitted from the tables (the more important of them are discussed in §6). For this reason, not all figures add up to 100% when tallied.

The investigation has sought to include all relevant typological attributes. Certain attributes are grouped together, where it has been considered logical, in the seriation of the main sequence. Thus, for instance, royal epithets include *di-nh*, *nh-dt*, as well as *di-nh-dt*. However, the actual numbers for each variation is always noted, so that the basis for the seriation is fully transparent. A couple of details proved difficult. The glaze is rarely if ever recorded according to a systematic reference system and many publications omit to mention it (or its absence) at all. In the case of heads, it has been consistently recorded whether the clypeus is marked or not, which is an important diagnostic attribute, but head types have otherwise been omitted from the analysis, since the majority display trapezoidal forms¹⁴. There is some variation, but the published drawings are often too sketchy or inaccurate, and even with photographs, it is often difficult to make out the precise form.

¹³ Ward 1984.

¹⁴ Ward 1984, 166, similarly concludes: »The statistical analysis of the use of head types is somewhat vague and there is little to be said beyond some general observations.« He does not discuss the clypeus.

This leads to the question of possible sources of error. In the case of seals not personally examined, the database relies on the available publications. Unfortunately, a good photographic record is only available for a limited number of the one thousand seals; in numerous cases only line-drawings have been published, even in very recent publications. As might be expected, the quality of these drawings vary considerable, and sometimes different drawings of the same seal indicate quite different diagnostic attributes¹⁵. It is similarly a problem that many publications omit the profile of the seals, since the sculpturing is crucial to the classification. Some, mainly older, publications also omit the back of the seals. For this reason, there is a much larger statistical basis for the study of the inscriptions and the decoration of the base of the seals than for the sculpturing of the profiles and backs. Sizes are often not precisely recorded and plates and drawings said to be reproduced at natural scale are not always exactly 1 : 1. Although a couple of millimeters represent a significant variation in relation to scarabs, this is generally less of a problem since the inaccuracies will tend to be evened out by averages, and the sizes of isolated items are statistically insignificant¹⁶.

5 Main sequence of royal name seals

5.1 The main diagnostic attributes

Table 7 presents an overview of the most important diagnostic features of the seals included in the main sequence, while a detailed breakdown of the specific numbers can be found in tables 8–12. Examples of the attributes are illustrated in figures 1–3. The overview is largely self-explanatory¹⁷. It omits a number of uncommon diagnostic attributes, which are discussed separately below (§6), and also the marking of the elytra (wing-cases) which seems to have been more or less optional and mainly restricted to finer specimens. The average length of the seals is included in the overview, but size is not a diagnostic attribute in itself; groups of seals pertaining to the same individual display considerable variation, and isolated items have limited or no value.

5.2 Consistency of main sequence seriation

The typological seriation displays a gradual and almost perfectly consistent development which, in my view, serves to validate the hypothesis concerning the application of typological seriation presented above. The deviations from an otherwise entirely consistent pattern are minimal and well within what might be expected when dealing with a limited statistical sample; in most cases the sample includes less than twenty specimens. As far as profiles are concerned, only Sekhaenre, Maaibre, and Sheshi exceed this number, while for decoration also Ahetepre and ^cAmmu exceed twenty. The only notable deviation concerns the use of the design consisting of two pairs of signs in the flanks, which is not attested for Nubuserre Qareh as might be expected (cf. tab. 10).

¹⁵ I have made extensive use of the important collection of scarabs reproduced by Tufnell 1984, pls. 53–64, but I have not always found the drawings entirely accurate. The publication of the seals in Basel by Hornung – Staehelin 1976 remains exemplary.

¹⁶ I have generally recorded sizes with an accuracy of ½ mm, but some publications provide measurements with an accuracy of as much as 1/10 mm. Figures with an apparent accuracy of less than ½ mm in the present paper mostly represent averages.

¹⁷ The abbreviations P and N refer to seals inscribed with the *prenomen* or *nomen*, respectively. The *prenomen* is the name listed first in the heading and the *nomen* is the second. Where nothing is added before the given figure, it represents a total of the two groups of seals, as will also be clear from the absolute figures provided in parenthesis. In the case of Khyan, the abbreviation H refers to those seals where the title of Hyksos is used. In a very few cases – five in all – seals are counted twice in the table, either because they are inscribed with two royal names (one seal of Meruserre Ya^cqub-Har and one of Auserre Apophis, §1) or because they are inscribed with two royal titles (one seal of Apophis has both »Dual King« and »Son of Re«, and two seals of Khyan have both »Good God« and »Son of Re«).

Table 7 The main sequence. Simplified version including only the most important diagnostic attributes

Attribute	Sekhaenre Ya ^c ammu	Ahetepre Yakbim	Nubuserre Qareh	Khauserre ^c Ammu	Maaibre Sheshi	Meruserre Ya ^c qub-Har	Seuserenre Khayan H = Hyksos	Auserre Apophis
SIZE								
Average length (mm)	17.5	18.3	18.8	20.1	19.8	20.5	20.2	16.4
ROYAL ATTRIBUTES								
Cartouche				8%	37%	62%	88% (excl. H)	91%
Royal epithets (<i>di-ⁿh</i> , <i>ⁿh-dt</i> , <i>di-^cn^h-dt</i>)		57%	100%	97%	98%	100%	88% (excl. H)	92%
SCULPTURING								
Simple profiles (sandwich profile, plain legs)	100%	100%	100%	100%	79%	(5%)	(0% excl. H) (6% incl. H)	
Complex profiles (notched legs, grooved legs)					21%	95%	100% (excl. H) 94% (incl. H)	100%
Marked clypeus	(2%)	(2%)			21%	100%	100% (excl. H) 93% (incl. H)	33%
DECORATION OF BASE								
Panels	100%	71%	61%	29%	11%			
2 pairs of signs		10%		59%	37%		(6% excl. H) (3% incl. H)	
2 pairs of scrolls				5%	32%	(4%)		
3 or 4 pairs of signs					9%	29%	24% (excl. H) 57% (incl. H)	(9%)
3 pairs of scrolls		(2%)		(2%)	3%	68%	71% (excl. H) 40% (incl. H)	64%
KEY								
 Red marks >10% occurrence. – Lighter red marks ≤10% occurrence. – Numbers placed in parenthesis signal percentages based on more than a single occurrence; those that join a sequence are marked in very light red , while outliers are marked with yellow .								

Table 8 The main sequence. General statistics on size and royal attributes

Attribute	Sekhaenre (95) Yá'ammu (6)	Ahetepre (29) Yakbim (22)	Nubuserre (16) Qareh (8)	Khauserre (17) °Ammu (27)	Maaibre (152) Sheshi (238)	Meruserre (13) Yá'qub-Har (17)	Seuserenre (3) Khayan (14) Hyksos Khayan (18)	Auserre (7) Apophis (5)
SIZE								
Length, range	P: 14–22 mm (65) N: 16–20 mm (5)	P: 14–21 mm (23) N: 15–22 mm (19)	P: 16–21 mm (15) N: 18–22 mm (8)	P: 18–23.5 mm (14) N: 18–23 mm (21)	P: 15–24 mm (91) N: 15–25 mm (131)	P: 17–24 mm (10) N: 18–23 mm (11)	P: 18–21 mm (3) N: 16–23 mm (8) H: 17.5–24.5 mm (9)	P: 14–19 mm (7) N: 14–25 mm (3)
Length, average	P: 17.49 mm (65) N: 17.90 mm (5)	P: 17.44 mm (23) N: 19.53 mm (19)	P: 18.35 mm (15) N: 19.75 mm (8)	P: 19.99 mm (14) N: 20.33 mm (21)	P: 19.63 mm (91) N: 19.89 mm (131)	P: 19.68 mm (10) N: 21.45 mm (11)	P: 19.33 mm (3) N: 19.63 mm (8) H: 21.00 mm (9)	P: 15.6 mm (7) N: 17.67 mm (3)
	17.52 mm (70)	18.30 mm (42)	18.83 mm (23)	20.12 mm (35)	19.79 mm (222)	20.54 mm (20)	20.2 mm (20)	16.53 mm (9)
ROYAL ATTRIBUTES								
Cartouche	P: 0% (0/75) N: 0% (0/5)	P: 0% (0/27) N: 0% (0/22)	P: 0% (0/15) N: 0% (0/8)	P: 8% (1/13) N: 8% (2/25)	P: 16% (24/146) N: 50% (112/224)	P: 58% (7/12) N: 65% (11/17)	P: 100% (3/3) N: 86% (12/14) H: 0% (0/14)	P: 100% (7/7) N: 80% (4/5)
Royal titles	0% (0/80)	0% (0/49)	0% (0/23)	8% (3/38)	37% (136/370)	62% (18/29)	88% (15/17) ^{excl. H}	91% (10/11)
Since royal titles is main the selection criterion, this attribute occurs on all the seals. Only the seals of Khayan as a Hyksos form an exception.								
Royal epithets	P: 0% (0/75) N: 0% (0/5)	P: 93% (25/27) N: 14% (3/22)	P: 100% (15/15) N: 100% (8/8)	P: 100% (13/13) N: 96% (24/25)	P: 99% (143/145) N: 97% (216/222)	P: 100% (12/12) N: 100% (17/17)	P: 100% (3/3) N: 86% (12/14) H: 0% (0/14)	P: 100% (7/7) N: 83% (4/5)
	0% (0/80)	57% (28/49)	100% (23/23)	97% (37/38)	98% (359/367)	100% (29/29)	88% (15/17) ^{excl. H}	91% (10/11)

Table 9 The main sequence. General statistics on sculpturing

Attribute	Sekhaenre (95) Yá'ammu (6)	Ahetepre (29) Yakbim (22)	Nubuserre (16) Qareh (8)	Khauserre (17) °Ammu (27)	Maaibre (152) Sheshi (238)	Meruserre (13) Yá'qub-Har (17)	Seuserenre (3) Khayan (14) Hyksos Khayan (18)	Auserre (7) Apophis (5)
SCULPTURING								
Simple profiles (sandwich profile, plain legs)	P: 100% (56/56) N: 100% (5/5)	P: 100% (20/20) N: 100% (15/15)	P: 100% (13/13) N: 100% (8/8)	P: 100% (10/10) N: 100% (18/18)	P: 82% (67/82) N: 78% (98/126)	P: 0% (0/7) N: 7% (1/14) H: 12½% (1/8)	P: 0% (0/2) N: 0% (0/7) H: 12½% (1/8)	P: 0% (0/5) N: 0% (0/2)
Complex profiles (notched legs, grooved legs)	100% (61/61)	100% (35/35)	100% (21/21)	100% (28/28)	79% (165/208)	5% (1/21)	6% (1/17)	0% (0/6)
	P: 0% (0/56) N: 0% (0/5)	P: 0% (0/20) N: 0% (0/15)	P: 0% (0/13) N: 0% (0/8)	P: 0% (0/10) N: 0% (0/18)	P: 18% (15/82) N: 22% (28/126)	P: 100% (7/7) N: 93% (13/14) H: 87½% (7/8)	P: 100% (2/2) N: 100% (7/7) H: 87½% (7/8)	P: 100% (5/5) N: 100% (2/2)
Marked clypeus	0% (0/61)	0% (0/35)	0% (0/21)	0% (0/28)	21% (43/208)	95% (20/21)	94% (16/17)	100% (6/6)
	P: 2% (1/48) N: 0% (0/5)	P: 0% (0/27) N: 7% (1/14)	P: 0% (0/13) N: 0% (0/8)	P: 0% (0/12) N: 0% (0/19)	P: 17% (11/63) N: 22% (26/117)	P: 100% (9/9) N: 100% (13/13)	P: 100% (2/2) N: 100% (8/8) H: 75% (3/4)	P: 50% (2/4) N: 0% (0/2)
	2% (1/53)	2% (1/41)	0% (0/21)	0% (0/31)	21% (37/180)	100% (22/22)	93% (13/14)	40% (2/5)

Table 10 The main sequence. Statistics on decoration of base

Attribute	Sekhaemre (95) Ya'ammu (6)	Ahetepre (29) Yakbim (22)	Nubuserre (16) Qareh (8)	Khauserre (17) 'Ammu (27)	Maaibre (152) Sheshi (238)	Meruserre (13) Ya'qub-Har (17)	Seuserre (3) Khayan (14) Hyksos Khayan (18)	Auserre (7) Apophis (5)
DECORATION OF BASE								
Panel, bars	P: 100% (95/95) N: 100% (5/5)	P: 64% (18/28) N: 81% (17/21)	P: 87.5% (13/15) N: 37% (3/8)	P: 50% (8/16) N: 16% (4/25)	P: 3% (4/144) N: 16% (36/219)	P: 0% (0/13) N: 0% (0/17)	P: 0% (0/3) N: 0% (0/14) H: 0% (0/18)	P: 0% (0/7) N: 0% (0/5)
2 pairs of signs	100% (100/100)	71% (35/49)	61% (16/23)	29% (12/41)	11% (40/363)	0% (0/30)	0% (0/35)	0% (0/11)
	P: 0% (0/95) N: 0% (0/5)	P: 7% (2/28) N: 15% (3/21)	P: 0% (0/15) N: 0% (0/8)	P: 38% (6/16) N: 72% (18/25)	P: 40% (57/144) N: 35% (77/219)	P: 0% (0/13) N: 0% (0/17)	P: 0% (0/3) N: 7% (1/14) H: 0% (0/18)	P: 0% (0/7) N: 0% (0/5)
2 pairs of scrolls	0% (0/100)	10% (5/49)	0% (0/23)	59% (24/41)	37% (134/363)	0% (0/30)	3% (1/35)	0% (0/11)
	P: 0% (0/95) N: 0% (0/5)	P: 0% (0/28) N: 0% (0/21)	P: 0% (0/15) N: 0% (0/8)	P: 0% (0/16) N: 8% (2/25)	P: 35% (51/144) N: 30% (65/219)	P: 15% (2/13) N: 0% (0/17)	P: 0% (0/3) N: 0% (0/14) H: 0% (0/18)	P: 0% (0/7) N: 0% (0/5)
3 pairs of scrolls	0% (0/100)	0% (0/49)	0% (0/23)	5% (2/41)	32% (116/363)	7% (1/30)	0% (0/35)	0% (0/11)
	P: 0% (0/95) N: 0% (0/5)	P: 4% (1/28) N: 0% (0/21)	P: 0% (0/15) N: 0% (0/8)	P: 6% (1/16) N: 0% (0/25)	P: 3% (4/144) N: 3% (7/219)	P: 62% (8/13) N: 65% (11/17)	P: 67% (2/3) N: 71% (10/14) H: 11% (2/18)	P: 71% (5/7) N: 40% (2/5)
3+ pairs of signs	0% (0/100)	2% (1/49)	0% (0/23)	2% (1/41)	3% (11/363)	63% (19/30)	71% (12/17) ^{excl. H} 40% (14/35) ^{incl. H}	64% (6/11)
	P: 0% (0/95) N: 0% (0/5)	P: 0% (0/28) N: 0% (0/21)	P: 0% (0/15) N: 0% (0/8)	P: 0% (0/16) N: 0% (0/25)	P: 14% (20/144) N: 6% (13/219)	P: 23% (3/13) N: 35% (6/17)	P: 33% (1/3) N: 21% (3/14) H: 89% (16/18)	P: 14% (1/7) N: 0% (0/5)
	0% (0/100)	0% (0/49)	0% (0/23)	0% (0/41)	9% (33/363)	30% (9/30)	24% (4/17) ^{excl. H} 57% (20/35) ^{incl. H}	9% (1/11)

Table 11 The main sequence. Detailed statistics on royal titles and epithets

Attribute	Sekhaenre (95) Ya ^c ammu (6)	Ahetepre (29) Yakbim (22)	Nubuserre (16) Qareh (8)	Khauserre (17) ^c Ammu (27)	Maaibre (152) Sheshi (238)	Meruserre (13) Ya ^c qub-Har (17)	Seuserenre (3) Khayan (14) Hyksos Khayan (18)	Auserre (7) Apophis (5)
ROYAL TITLES								
Good god (<i>nfr-nfr</i>)	P: 100% (88/88) N: 0% (0/6)	P: 100% (28/28) N: 0% (0/22)	P: 100% (15/15) N: 0% (0/8)	P: 100% (15/15) N: 8% (2/25)	P: 99% (154/156) N: 1% (3/225)	P: 92% (12/13) N: 0% (0/17)	P: 67% (2/3) N: 7% (1/14) H: 0% (0/14)	P: 0% (0/7) N: 0% (0/5)
Son of Re (<i>s3-r^c</i>)	P: 0% (0/88) N: 100% (6/6)	P: 0% (0/28) N: 100% (22/22)	P: 0% (0/15) N: 100% (8/8)	P: 0% (0/15) N: 92% (23/25)	P: 1% (2/156) N: 99% (222/225)	P: 8% (1/13) N: 100% (17/17)	P: 67% (2/3) N: 100% (14/14) H: 0% (0/14)	P: 0% (0/7) N: 60% (3/5)
Dual King (<i>nsw-bity</i>)	-	-	-	-	-	-	-	P: 43% (3/7) N: 60% (3/5)
King (<i>bity</i>)	-	-	-	-	-	-	-	45% (5/11)
Good king (<i>nsw-nfr</i>)	-	-	-	-	-	-	-	P: 43% (3/7) N: 0% (0/5)
	-	-	-	-	-	-	-	27% (3/11)
	-	-	-	-	-	-	-	P: 14% (1/7) N: 0% (0/5)
	-	-	-	-	-	-	-	9% (1/11)
ROYAL EPITHETS								
Given life (<i>di-nh</i>)	P: 0% (0/75) N: 0% (0/5)	P: 70% (19/27) N: 12% (3/22)	P: 100% (15/15) N: 100% (8/8)	P: 100% (13/13) N: 96% (24/25)	P: 96% (139/145) N: 20% (45/222)	P: 100% (12/12) N: 100% (17/17)	P: 100% (3/3) N: 67% (10/14)	P: 71% (5/7) N: 40% (2/5)
Living forever (<i>nhr-dt</i>)	P: 0% (0/75) N: 0% (0/5)	P: 22% (6/27) N: 0% (0/22)	P: 0% (0/15) N: 0% (0/8)	P: 0% (0/13) N: 0% (0/25)	P: 3% (4/145) N: 77% (171/222)	P: 0% (0/12) N: 0% (0/17)	P: 0% (0/3) N: 14% (2/14)	P: 14% (1/7) N: 20% (1/5)
Given life forever (<i>di-nhr-dt</i>)	P: 0% (0/75) N: 0% (0/5)	P: 0% (0/27) N: 0% (0/22)	P: 0% (0/75) N: 0% (0/5)	P: 0% (0/13) N: 0% (0/25)	P: 0% (0/145) N: 0% (0/222)	P: 0% (0/12) N: 0% (0/17)	P: 0% (0/3) N: 0% (0/14)	P: 14% (1/7) N: 40% (2/5)

Table 12 The main sequence. Detailed statistics on sculpturing

Attribute	Sekhaenre (95) Yá'ammu (6)	Ahetepre (29) Yakbim (22)	Nubserre (16) Qareh (8)	Khauserre (17) 'Ammu (27)	Maaibre (152) Sheshi (238)	Meruserre (13) Yá'qub-Har (17)	Seuserenre (3) Khayan (14) Hyksos Khayan (18)	Auserre (7) Apophis (5)	
SIMPLE PROFILES									
Sandwich profile	P: 57% (32/56) N: 100% (5/5)	P: 65% (13/20) N: 33% (5/15)	P: 100% (13/13) N: 37% (3/8)	P: 0% (0/10) N: 17% (3/18)	P: 16% (13/82) N: 25% (32/126)	P: 0% (0/7) N: 0% (0/14)	P: 0% (0/2) N: 0% (0/7) H: 12½% (1/8)	P: 0% (0/5) N: 0% (0/2)	
	61% (37/61)	51% (18/25)	76% (16/21)	11% (3/28)	22% (45/208)	0% (0/21)	6% (1/17)	0% (0/6)	
	P: 43% (24/56) N: 0% (0/5)	P: 35% (7/20) N: 67% (10/15)	P: 0% (0/13) N: 63% (5/8)	P: 100% (10/10) N: 83% (15/18)	P: 66% (54/82) N: 52% (66/126)	P: 0% (0/7) N: 7% (1/14)	P: 0% (0/2) N: 0% (0/7) H: 0% (0/8)	P: 0% (0/5) N: 0% (0/2)	
Plain legs	39% (24/61)	49% (17/25)	24% (5/21)	89% (25/28)	58% (120/208)	5% (1/21)	0% (0/17)	0% (0/6)	
	COMPLEX PROFILES								
	Notched legs	P: 0% (0/56) N: 0% (0/5)	P: 0% (0/20) N: 0% (0/15)	P: 0% (0/13) N: 0% (0/8)	P: 0% (0/10) N: 0% (0/15)	P: 18% (15/82) N: 22% (28/126)	P: 100% (7/7) N: 86% (12/14)	P: 100% (2/2) N: 100% (7/7) H: 62½% (5/8)	P: 20% (1/5) N: 0% (0/2)
0% (0/61)		0% (0/35)	0% (0/21)	0% (0/25)	21% (43/208)	90% (19/21)	82% (14/17)	17% (1/6)	
P: 0% (0/56) N: 0% (0/5)		P: 0% (0/20) N: 0% (0/15)	P: 0% (0/13) N: 0% (0/8)	P: 0% (0/10) N: 0% (0/15)	P: 0% (0/82) N: 0% (0/126)	P: 0% (0/7) N: 7% (1/14)	P: 0% (0/2) N: 0% (0/7) H: 25% (2/8)	P: 80% (4/5) N: 100% (2/2)	
Grooved legs	0% (0/61)	0% (0/35)	0% (0/21)	0% (0/25)	0% (0/208)	5% (1/21)	12% (2/17)	83% (5/6)	

However, with a 10% attestation for Ahetepre Yakbim and a sample of just 24 seals of Nubuserre Qareh, it would only take a total of two or three seals inscribed with either of those two royal names to bridge this apparent deviation. When dealing with such small numbers, chances of preservation play a considerable role and there is a greater risk of distortion in the analysis.

An estimate of the consistency can be worked out mathematically in terms of the outliers as a percentage of the full sample. This exercise yields the following results:

Table 13 Consistency of the main diagnostic attributes

Attribute	Sample size	Outliers	Consistency
Cartouche	616	0	100%
Epithets	616	0	100%
Profiles	398	0	100%
Clypeus	355	2	99.4%
Decoration	646	7	98.9%
Total	2 631	9	99.7%

5.3 Comparison with earlier seriation

The present seriation agrees with those previously published by William A. Ward, Rolf Krauss and myself in most respects, but a few important differences need to be addressed¹⁸. The independent seriations by Krauss and myself from 1997 and 1998 were in complete agreement, apart from the relatively insignificant point that we associated different *nomina* with Khauserre. We both worked mainly on the basis of the material collected by Ward, whose main sequence was based on 325 seals. Having now a significantly larger and more detailed database available than I did twenty years ago, with more than 650 seals for the main sequence and nearly 400 other seals, and having studied a great number of seals in various collections in detail, it has proved possible to make two adjustments. Among the sequence of seals inscribed with *prenomina*, Ahetepre should likely be placed earlier in the list, and among the sequence inscribed with *nomina*, Ya^cammu should similarly be placed earlier. This means that different *prenomina* and *nomina* should be coupled, which results in a shift in identities, but the adjustments have limited impact on the general conclusions that may be drawn from the seriation.

Table 14 Results of main sequence seriations of royal name seals of the 14th and 15th Dynasties

	Present study	Ryholt 1997	Krauss 1998	Ward 1984
Earlier ↓ Later	Sekhaenre Ya ^c ammu	Sekhaenre Yakbim	Sekhaenre Yakbim	Seuserenre Khyan
	Ahetepre Yakbim	Nubuserre Ya ^c ammu	Nubuserre Ya ^c ammu	Meruserre Ya ^c qub-Har
	Nubuserre Qareh	Khauserre Qareh	Khauserre ^c Ammu	Maaibre Sheshi
	Khauserre ^c Ammu	Ahetepre ^c Ammu	Ahetepre	Khauserre ^c Ammu
	Maaibre Sheshi	Maaibre Sheshi	Maaibre Sheshi	Sekhaenre Yakbim
	Meruserre Ya ^c qub-Har	Meruserre Ya ^c qub-Har	Meruserre Ya ^c qub-Har	Nubuserre Ya ^c ammu
	Seuserenre Khyan	Seuserenre Khyan	Seuserenre Khyan	Ahetepre
	Auserre Apophis	Auserre Apophis	Apophis	Apophis

In relation to the seriation by Ward, there is also more agreement than first meets the eye. Both have resulted in the same coupling of prenomens and nomens and the same sequence in relation to Khauserre ^cAmmu → Maaibre Sheshi → Meruserre Ya^cqub-Har → Seuserenre Khyan. Both further agree, as far as nomens are concerned, with the sequence Ya^cammu → Yakbim → ^cAmmu.

¹⁸ Ward 1984, 151–192; Ryholt 1997, 40–65; Krauss 1998, 39–42.

The present seriation adds Qareh between Yakbim and ^cAmmu, but this does not affect the order of the other rulers. The seals of Qareh were incorrectly read in Ward's studies, on three seals as »Šub (?)« and on a fourth as »Qar (?)«, and, believing he was dealing with two poorly attested kings, these seals were omitted from his main sequence¹⁹.

The one fundamental difference between Ward and subsequent studies is the fact that he proposed the almost exact opposite order of the kings preceding Apophis. This was the result of his assumption that the largest seals were earlier and that each successive ruler produced smaller seals than his predecessor. This, in turn, led to severe inconsistencies in his seriation, as already pointed out by Krauss and myself. According to Ward's seriation, cartouches were used both early and late in the sequence, but fully abandoned by Sekhaenre, Nubuserre, and Ahetepre in the middle; royal epithets were used both early and late, but fully abandoned by Sekhaenre; three pairs of scrolls design was used by early and late, but not used anymore by Sekhaenre and Nubuserre, etc. It is striking that Apophis in each case was believed to have resumed the exact typological features that were used by Khyan but which were then, according to Ward's conclusions, abandoned during one or more reigns in between.

A further problem with Ward's seriation is the fact that he was compelled to identify all the kings in question, as well as several others with typologically similar seals, as Hyksos, since his sequence began with Khyan and ended with Apophis, both of whom evidently belong to the 15th Dynasty. However, later sources explicitly refer to the Hyksos as six in number, and none of the other kings is ever attested with the title of *ḥk-ḥ3swt*.

6 Special attributes

6.1 General comments

A number of distinct but uncommon attributes (figs. 4–6) are omitted from the main sequence presented above. They are instead listed separately in table 15 (where I include also the winged sun-discs although they are not attested for kings)²⁰. Despite the very limited quantities involved, it will be immediately apparent that these attributes conform perfectly to the results of the main sequence by falling within small clusters of seals that, according to the conclusions drawn above, were produced around the same point in time. The attributes are attested for seals inscribed with different names of the same ruler: the paired plants for Khauserre and ^cAmmu; the fish/fishbone for Maaibre and Sheshi, for Meruserre and Ya^cqub-Har, and for Khyan as Hyksos and as king; concentric circles for Maaibre and Sheshi; and *nsw-bity* for Auserre and Apophis. Or for kings who ruled in succession: fish/fishbone for Maaibre/Sheshi → Meruserre/Ya^cqub-Har → Khyan; cobras for Khyan → Apophis; human head for Khyan → Apophis. For reasons of space, not all of these attributes will be discussed in detail, but two of them merit a few words.

¹⁹ For the reading of the royal name, see Ryholt 1998.

²⁰ It is possible that the decoration here described as »fishbone« rather represents stylized branches or wreaths, but the exact interpretation is of little relevance in the present context. In two cases a whole fish is depicted, apparently a tilapia, which is remarkable, since this was a traditional Egyptian symbol of resurrection.

Table 15 Special attributes not included in the main sequence seriation

Identity	Decoration of base					Decoration of back		Royal titles	
	Plants in pairs	Winged sun-discs	Rope around edge	Concentric circles	Cobras	Fish/fishbone	Human head	Dual king (<i>nsw-bity</i>)	King (<i>bity</i>)
Main sequence kings in the hypothetical chronological order									
Sekhaenre									
Ya ^c ammu									
Ahetepre									
Yakbim									
Nubuserre									
Qareh									
Khauserre	1								
^c Ammu	1								
Maaibre				2		2			
Sheshi			2	4		2			
Meruserre						1			
Ya ^c qub-Har						5			
Hyksos Khyan					3	1	1		
Seuserenre									
Khyan						1			
Auserre							1	3	3
Apophis					1			3	
Supplementary seals, not in chronological order									
King Shenes			1						
King Wadjed						2			
Prince Ipqu		1	2					n/a	
Prince Quppen		1		1					
Treasurer Har						1			

6.1 Protective cobras

On royal name seals of the 15th Dynasty, a pair of cobras is sometimes added as a protective element on both sides of the royal name. The cobra represents another clear adoption from traditional Egyptian royal iconography. Several examples are attested in the case of Khyan (fig. 4, bottom row, left and middle). Here the cobra design is essentially a variation of the design consisting of three pairs of signs in the flanks, separated by a pair of vertical strokes, where the lower pair of signs is replaced by the cobras. The cobra heads are added directly to the lower end of the straight, vertical lines and thus they appear as if hanging suspended. Only a single seal of Apophis displays a pair of cobras (fig. 4, bottom row, right) and the design is different to that of Khyan. The heads of the cobras are here depicted in the upper part of the base and their bodies are coiled. The inscription, unique among royal name seals of the Second Intermediate Period, is well-attested on royal monuments from which it was likely adopted. It is an optative sentence consisting of the verb *ankh* followed by the identity of the king: »May live the Son of Re, Apophis, given life!«

6.2 Apophis and the titles *nsw* and *bity*

Among the special attributes listed in tables 11 and 15, the use of the titles »king« (*nsw*), »good king« (*nsw nfr*), and »dual king« (*nsw-bity*) on seals of Apophis is particularly noteworthy²¹. These titles are not attested for any of the other kings of the 14th and 15th Dynasties. By contrast,

²¹ There are a total of five examples of the title »dual king«, rather than six as the tables imply, since in one case it occurs on a seal that records both the *prenomen* and the *nomen* of the king.

the common title »good god« (*ntr-nfr*), which is used by all earlier kings for their *prenomina*, is not attested on the seals of Apophis. The situation is all the more curious, since the latter title is in fact used on monuments of his²². Moreover, the title *bity* is mostly written with the Red Crown rather than the bee which represents the more common orthography; so on all but one of the seals and also one of the two monuments on which it occurs²³. Might this be an attempt to avoid depicting a potentially harmful creature for superstitious or magical reasons? Interestingly, a further example of this orthography occurs on a seal of king Ahmose (fig. 7) who challenged and defeated Apophis²⁴.

7 Supplementary series of royal name seals

7.1 Inclusions

The supplementary series of royal name seals comprises those kings who are too scarcely attested for inclusion in the main sequence. Two of these kings are particularly important, since their names are also preserved in the extant fragments of the Turin King List, sc. Nehsy and Sekheperenre. These are the only kings of the 14th and 15th Dynasties attested both by seals and the King List, and accordingly they provide the only possibility to correlate specific typological attributes against a section of the King List. Four further kings are included in the supplementary series: Shenshek, Wadjed, Shenes, and Khamure.

7.2 Exclusions

The seals of the *hk-h3swt* Anat-Har and Semqen have not been included in the table, since they are not attested with royal titles, but the two men may well represent rulers of the 15th Dynasty. The two seals of Anat-Har measure 13.5 and 15.5 mm in length and lack decoration on the base²⁵. They have notched legs, marked clypeus, and marked elytra. The seal of the *hk-h3swt* Semqen, which measures 19 mm in length, displays the three pairs of scrolls design. It too has notched legs, marked clypeus, and marked elytra²⁶. The sculpturing of these seals matches those of Sheshi through Apophis in the main sequence with two exceptions. The marked elytra occurs throughout the main sequence, but is relatively rare except in the case of Khyan (25%, 15 of 20 seals), and the small size of the seals of Anat-Har is only matched by seals of Apophis.

²² Cf. conveniently Helck 1983, 55–56.

²³ The monument, a large stone vessel, is published by Padró – Molina 1986. The single seal that uses the bee instead of the red crown is Ägyptisches Museum Berlin, inv. 32722 (unpublished, personal examination).

²⁴ British Museum, inv. EA 64076 (unpublished, personal examination). The seal was donated by P. E. Newberry to the British Museum in 1938, and according to a note I found among his papers in the Griffith Institute Archives, he acquired the seal from a dealer in Luxor on 26 January 1933. It is made from a blue glaze material, which is never used by the kings of the 14th and 15th Dynasties, and it is also somewhat larger than the bulk of those seals, measuring 25.5 × 18.0 × 9.0 mm. Accordingly, and as might be expected, it must be the product of another workshop. The royal name is written inside a cartouche flanked by two pairs of signs. It further has notched legs and marks the elytra, but the clypeus is not marked. I am grateful to the keeper of the Egyptian collection at the British Museum, Neal Spencer, for permission to publish the drawing of the seal.

²⁵ Martin 1971, nos. 349–350.

²⁶ Martin 1971, no. 1453; Hornung – Staehelin 1976, no. 166.

Table 16 Diagnostic attributes of the royal name seals not included in the main sequence

Identity	Royal insignia			Profile			Decoration of base			clypeus	
	cartouche	<i>di-ꜥnh</i>	<i>wꜣh-ꜥnh</i>	sandwich	plain	notched	panels w. crossbars	3+ signs, not separated	3+ signs, separated		3 scrolls
Nehsy 2 seals, 16.5 mm	√ (1/2)	√ (2/2)			√ (1/1)	√ (1/1)				√ (1/2)	÷ (0/2)
Sekheperenre 1 seal, 19.0 mm	√ (1/1)	√ (1/1)				√ (1/1)				√ (1/1)	√ (1/1)
Shenshek 1 seal, 20.0 mm	÷ (0/1)	√ (1/1)			√ (1/1)		√ (1/1)				÷ (0/1)
Khamure 3 seals, 20.0 mm	0% (0/3)	0% (0/3)		√ (1/3)	√ (2/3)		100% (3/3)				0% (0/3)
Shenes 3 seals, 15.5 mm	0% (0/3)		100% (3/3)	√ (1/3)	√ (1/3)	√ (1/3)					√ (1/2)
Wadjed 5 seals, 21.5 mm	80% (4/5)	100% (5/5)				100% (3/3)		20% (1/5)	20% (1/5)	60% (3/5)	100% (2/2)

7.3 King Nehsy

King Nehsy is particularly important among the kings here under discussion. He alone is attested by both monuments and seals and has a preserved record of his name in the Turin King List (column 8, line 1; fig. 8)²⁷. Moreover, a number of seals inscribed for a king's son and an eldest king's son Nehsy is likely to represent the same historical individual (§10.7).

Although he is attested by several monuments, only two seals can be attributed with certainty to Nehsy as king (as opposed to the more numerous seals with the title of king's son), and his reign is generally assumed to have been very short, less than a year, on the basis of the King List. As regards the latter, I should like to add a brief comment. The record of Nehsy's reign length is damaged in the King List and has generally been understood as:

rnpt (blank) ▪ [x ▪] ꜣ »Years: (0). Months: [x. Days:] ꜣ«

The ancient scribe mostly wrote ditto marks (here marked ▪) to indicate the words for months and days, and he left a blank space where the figure was zero²⁸. However, it cannot be excluded that the initial trace after *rnpt* should be read as a figure rather than a ditto mark. That would yield:

rnpt x [▪] ꜣ »Years: x. [Months:] ꜣ«

We may, in other words, be dealing with a reign of x years and precisely three months. In that case no figure would be added for the days. Unfortunately the hieratic writing of several figures would be compatible with the trace following *rnpt*, ranging from a single stroke to the ligature for the figure 40. In the writing of the present scribe, the full range of possible readings is likely to be 1, 2, 3, 8, 10, 20, 30, and 40²⁹.

²⁷ Monuments of Nehsy are discussed in Abd el-Maqsoud 1983; Bietak 1984; Yoyotte 1989a; Abd el-Maksoud – Valbelle 2005, 8–11, pl. 5 (for this monument, cf. also n. 57 of the present paper). For his position in the King List, see Ryholt 1997, 94–98. I am grateful to the director of Museo Egizio di Torino, Christian Greco, for permission to publish the scan of the relevant entry in the Turin King List here reproduced in fig. 8.

²⁸ Cf. Ryholt 2004, 140.

²⁹ There would hardly be room for four strokes (the figure 4) and in the case of a decimal, there would certainly not be room for an addition figure, so that those options would be limited to a round 10, 20, 30, or 40 years.



Fig. 7 Seal inscribed for king Ahmose, drawing enlarged by 50% (© K. Ryholt)



Fig. 9 Seal inscribed for the treasurer Ibtu, drawing enlarged by 50% (© K. Ryholt)

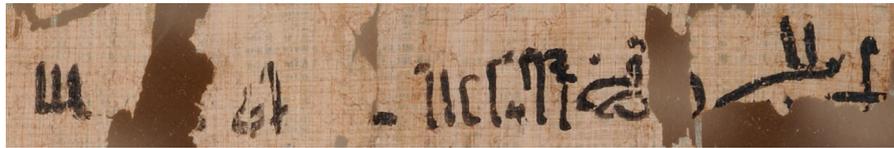


Fig. 8 King Nehsy in the Turin King List (© Museo Egizio di Torino)

On purely paleographical grounds, it is hardly possible to determine which of the two interpretations is the more likely. The monuments could point to a reign of some years, while the scarcity of royal name seals might point to a short one.

While several seals have been attributed to king Nehsy, only two of them can, in my view, be regarded as certain³⁰. One has plain legs, while the other has notched legs, and the two seals thus reflect the transition from the former to the latter that took place during the reign of Sheshi (tabs. 9. 12). In addition to the notched legs, which are not attested prior to Sheshi, one seal writes the name within a cartouche and uses the three pairs of scrolls design, both of which are rare prior to Sheshi. Neither seal marks the clypeus which is the case with virtually all seals of Ya^cqub-Har, while it is only infrequently marked on the numerous seals of Sheshi and very rarely marked prior to his reign. This combination of attributes indicates a date of production prior to the reign of Ya^cqub-Har, and either contemporary with or just subsequent to the reign of Sheshi. Assuming that Sheshi and Nehsy were not contemporary rulers, Nehsy would accordingly have been a close successor of Sheshi. This date is further supported by the dating of the seals of the eldest king's son Nehsy to the reign of Sheshi (§8.4), inasmuch as he is likely to be identical with the like-named king. The size of the two seals, 16.0 and 17.0 mm respectively, is also compatible with those of Sheshi which range from 15.0 mm upwards.

7.4 King Sekheperenre

Sekheperenre is the only other king who is both attested by a seal and identified in the Turin King List (column 8, line 16), but no monuments of his are known³¹. It is extraordinary that even a single seal has survived, since he ruled a mere two months, or more exactly between 61 and 64 days, according to the King List.

The seal displays notched legs and marked clypeus. The former is unattested and the latter very rare prior to Sheshi in the main sequence. Both the notched legs and the marked clypeus are

³⁰ Petrie Museum, 11589: Petrie 1917, pl. 19, 13.53; Tufnell 1984, no. 3469. Ägyptisches Museum Berlin, inv. 32298 (unpublished, personal examination). Other seals ascribed to king Nehsy have garbled inscriptions and are left out of discussion in the present paper.

³¹ For his position in the King List, see Ryholt 1997, 94–98.

attested on 21 % of Sheshi's own seals, whereas almost all seals of Ya^cqub-Har and Khyan display those two attributes. The use of the three pairs of scrolls design is rare prior to Sheshi and still uncommon on his seals (3 %), while it is used on about two-thirds of the seals of Ya^cqub-Har and Khyan. Similarly the use of the cartouche for the *prenomen* is only attested once prior to Sheshi, while it occurs on 16 % of his seals, on 58 % of Ya^cqub-Har's, and on each of the three seals of Khyan. The epithet »living forever« is less straightforward. It is only common on seals of Sheshi, but it is also attested for Ahetepre (6 examples), Shenshek (1 example), Khyan (1 example), and Apophis (1 example), whereas it is not so far attested for Ya^cqub-Har.

All in all, the diagnostic attributes indicate that Sekheperenre is later than Sheshi. This agrees well with his position as a successor of Nehsy in the 14th Dynasty section of the King List, since the seals of the latter, both as eldest king's son and as king, associate him with the reign of Sheshi (§7.3 and 8.4). To judge from the King List, the reigns of Nehsy and Sekheperenre were separated by perhaps 15–20 years, but the document is damaged and the exact figure is uncertain.

7.5 King Shenshek

The single seal of king Shenshek, who is otherwise unattested, displays plain legs and the panels-with-crossbars design and it does not mark the clypeus. This combination of attributes indicates a position prior to Ya^cqub-Har in the main sequence. It is not possible to assign him a more specific position.

7.6 King Wadjed

The seals of Wadjed are likely to have been produced very close in time to those of Ya^cqub-Har and Khyan with which they show close similarity; the use of notched legs, the marked clypeus, the three pairs of scrolls and three pairs of signs designs, and the fish/fishbone patterns as decoration (for the latter, cf. tab. 15). All of these attributes are also attested for Sheshi, but Wadjed's seals display none of the earlier attributes that dominate the seals of the latter. Whether he ruled between Ya^cqub-Har and Khyan, or was a relatively close predecessor or successor of the two, is not possible to determine on the basis of the typology currently available. However, the latter option seems to be ruled out by historical circumstances, since there is no indication that Wadjed was a Hyksos – unless he belongs to a point in the 15th Dynasty where the Hyksos title had been abandoned. For what it is worth, it may be noted that the size range and average of his seals (21.5 mm) matches that of Ya^cqub-Har.

7.7 King Shenes

Three seals are inscribed for a »Son of Re, Shenes, enduring of life« (*s3-r^c šns w3h-^cnh*)³². They display the three main profile types, i.e. the sandwich, plain legs, and notched legs profiles respectively. The only other kings for whom all three profiles are attested are Sheshi, in whose reign the main transition took place (tabs. 9 and 12), and Nehsy, who appears to have been his son and successor (§7.3 and 8.4). These profiles indicate that the production of the seals of Shenes was contemporary with or just subsequent to the reign of Sheshi³³. Shenes is further associated with Sheshi by the fact that these are the only two kings attested with the rare rope decoration (§6, tab. 15).

³² Because of the unexpected epithet *w3h-^cnh* and the arrangement of the two signs one above the other, which is uncommon during the 14th and 15th Dynasties, it is argued in Ryholt 1998, 197 n. 16, that the inscriptions should rather be read *s3-r^c šnh di-^cnh* with a garbled writing of *di*. Having examined two of the seals in person, I must concede that the original reading would be straightforward from an epigraphical point of view and I therefore retain the original reading here. Hopefully the discovery of further seals of the king might help clarify the issue.

³³ One of the seals seems to have a marked clypeus which also points to a date no earlier than Sheshi.

A noteworthy detail is the apparent use of the epithet »enduring of life« on all three seals of Shenes. This is otherwise unattested among the kings of the 14th and 15th Dynasties, and we seem to be dealing with an idiosyncratic detail. By way of comparison, the majority of seals inscribed with Sheshi's nomen used the epithet »living forever«, which similarly is not used for the *nomen* of any of the other 14th Dynasty kings, although it is attested a few times for Khyan and Apophis. The seals are also somewhat small, one measuring 14.5 mm and two measuring 16.0 mm, but they match seals of Sheshi which range from 15.0 mm upwards.

Assuming that Shenes was not a contemporary king (although this possibility cannot be ruled out), he is likely to have ruled soon after Sheshi and Nehsy. Accordingly, he may well be identical with one of the ephemeral successors of Nehsy recorded by their *prenomen* in the king list.

7.8 King Khamure (?)

A single seal is inscribed with what appears to be a clear writing of a *prenomen* Khamure (h^c-mw-r^c)³⁴. The seal displays plain legs and the panels-with-crossbars design. The title »good god« precedes the royal name, but there is no epithet. The elytra is marked, which is unusual, but the feature is infrequently attested for all but one of the kings in the main sequence. A very similar seal (without the marked elytra) has the same inscription, but omits the element -Re³⁵. Finally, a third seal displays an inscription similar to the latter, but with an apparently garbled writing of »good god«³⁶. This seal displays the sandwich profile. The royal title used on at least two if not all three of the seals also indicates that we are dealing with a *prenomen*, although there are a few rare examples of this title before a *nomen*.

If these three seals are correctly attributed to a distinct king Khamure, he is likely to be early in date. The use of the sandwich and plain legs profiles, the panels-with-crossbars design, and the lack of a marked clypeus merely indicate a date prior to Ya^cqub-Har. Much more important is the lack of a royal epithet on all three seals, since this suggests a date prior to Nubuserre among the first two kings of the main sequence. The size of the seals is not very helpful; they range from 19 to 21, which fall within the range of every king in the main sequence, and the average cannot be regarded as statistically representable with such a limited sample.

8 Seals of royal family

8.1 Inclusions

A single queen and a series of princes are attested by seals that typologically match those of the kings of the 14th and 15th Dynasties. Their names and the main diagnostic attributes of their seals are listed in the table 17.

Concerning the princes, it is noteworthy that we find not just the usual titles of king's son (*s3-nsw*) and eldest king's son (*s3-nsw smsw*), but also the same two titles with the additional element Re included³⁷. The latter addition is only attested for three princes; Ipqu, Nehsy, and Seket. The statistics are provided in table 18.

³⁴ So first read by Newberry 1906, 150 pl. XXI.30, and followed by Petrie 1917, pl. XXII, 16.K.1. Ward 1984, no. 3361, tacitly attributes the seal of ^cAmmu instead, reading 3^c-mw , but overlooks the clearly written -Re. Moreover, the element he reads 3^c is not found in a comparable orthography on other seals attributed to ^cAmmu, whereas similar writings of h^c occur on seals of Sekhaenre.

³⁵ Haynes – Markowitz 1991, no. 31.

³⁶ Petrie 1917, pl. XXII, 16.K.2. Petrie read the elements h^c , *mw*, and r^c , but seems to have misunderstood the syntax. Ward 1984, no. 3372A, tacitly attributes the seal to Yakbim instead, reading *y-k-b-mw*. However, the element he reads *k* is not found in a comparable orthography on other seals attributed to Yakbim, whereas similar writings of h^c occur on seals of Sekhaenre. The initial element on the seal is clearly garbled and may be read either *ntr-nfr* or *y*.

³⁷ The significance of the addition of the element Re to the titles *s3-nsw* and *s3-nsw smsw* remains uncertain.

Table 17 Diagnostic attributes of the seals of royal family members

Identity	Profile				Decoration of base						Back			
	cartouche	sandwich	plain	notched	grooved	panels w. crossbars	blank	2 signs, separated	2 signs, not separated	3+ signs, not separated		3+ signs, separated	2 scrolls	3 scrolls
Queen Tati 11 seals	64% (7/11)	50% (3/6)	33% (2/6)	17% (1/6)			20% (2/10)		60% (6/10)	20% (2/10)				0% (0/6)
Prince Ipqu 46 seals	0% (0/46)	24% (8/33)	58% (19/33)	18% (6/33)			93% (43/46)							10% (4/40)
Prince Nehsy 22 seals	5% (1/21)	56% (10/18)	22% (4/18)	6% (1/18)		10% (2/21)	86% (18/21)					5% (1/21)		6% (1/18)
Prince Quppen 11 seals	0% (0/10)			100% (8/8)			70% (7/10)				10% (1/10)			89% (8/9)
Prince Apophis A 2 seals	√ (1/2)	√ (1/2)	√ (1/2)			√ (1/2)						√ (1/2)		
Prince Apophis B 2 seals	√ (2/2)				√ (2/2)				√ (1/2)				√ (1/2)	√ (1/1)
Prince Apophis A/B (?) 1 seal	÷ (0/1)												√ (1/1)	
Prince Nebnet- jeru 1 seal	÷ (0/1)		√ (1/1)			√ (1/1)								÷ (0/1)
Prince Ysrym 1 seal	÷ (0/1)		√ (1/1)			√ (1/1)								÷ (0/1)
Prince Ili-Milku 1 seal	÷ (0/1)		√ (1/1)				√ (1/1)							÷ (0/1)
Prince Yakbim 2 seals	÷ (0/2)	√ (1/1)					100% (2/2)							÷ (0/2)
Prince Seket 7 seals	14% (1/7)	33% (2/6)	67% (4/6)				14% (1/7)		57% (4/7)			29% (2/7)		0% (0/6)

Table 18 Different designations of the sons of kings

Identity	Cartouche	King's son	King's son of Re	Eldest king's son	Eldest king's son of Re
Prince Ipqu 46 seals	0% (0/46)	4% (2/46)		93% (43/46)	2% (1/46)
Prince Nehsy 22 seals	5% (1/21)	18% (4/21)	5% (1/21)	59% (13/21)	18% (4/21)
Prince Quppen 11 seals	0% (0/10)			100% (10/10)	
Apophis A 2 seals	√ (2/2)		√ (2/2)		
Apophis B 2 seals	√ (1/2)	√ (2/2)			
Apophis A/B? 1 seals	÷ (0/1)	√ (1/1)			
Prince Nebnetjeru 1 seal	÷ (0/1)			√ (1/1)	
Prince Ysrym 1 seal	÷ (0/1)			√ (1/1)	
Prince Ili-Milku 1 seal	÷ (0/1)	√ (1/1)			
Prince Yakbim 2 seals	÷ (0/2)	50% (1/2)		50% (1/2)	
Prince Seket 7 seals	14% (1/7)	57% (4/7)	43% (3/7)		
Total 96 seals	5% (5/94)	16% (15/94)	6% (6/94)	73% (69/94)	5% (5/94)
		22%		78%	

8.2 Queen Tati

The seals of the king's wife Tati use both the earlier sandwich and plain legs profiles as well as the later notched legs profile and thus reflect the transition from the former to the latter that took place during the reign of Sheshi (tabs. 9. 12). Moreover, the frequent use of two pairs of signs in the flanks without a separating line is otherwise attested only for ^cAmmu Khauserre (5 seals) and Sheshi Maaibre (25 seals), apart from a single occurrence on a seal of Khyan. An even more specific attribute is the writing of the cartouche without its base line which seems unique to the seals of Tati and Sheshi. It is written in this manner on no less than six out of those seven seals of Tati where the cartouche is used, and it is attested on at least 25 seals of Sheshi. The lack of a marked clypeus is a further indication of a date prior to Ya^cqub-Har. All these attributes in combination point to a date of production specifically in the reign of Sheshi which, in turn, indicates that Tati was his queen.

8.3 Prince Ipqu

The seals of the eldest king's son Ipqu use both the earlier sandwich and plain legs profiles as well as the later notched legs profile and thus reflect the transition from the former to the latter that took place during the reign of Sheshi (tabs. 9. 12). The statistics are, in fact, remarkably alike. Ipqu has 24% sandwich profile, 58% plain legs, and 21% notched legs, while the corresponding number of Sheshi is 22%, 58%, and 21%. Moreover, two seals of Ipqu displays the rare rope decoration which is only otherwise attested for Sheshi among the main sequence kings (§6, tab. 15). These attributes point to a date of production specifically in the reign of Sheshi and indicate that Ipqu was a son of his.

8.4 Prince Nehsy

Like the seals of Ipqu, those of the eldest king's son Nehsy also use both the earlier sandwich and plain legs profiles as well as the later notched legs profile and thus reflect the transition from the former to the latter that took place during the reign of Sheshi (tabs. 9. 12). This dating is further supported by the use of the panels-with-crossbars design, which is not attested after the reign of Sheshi, and the marked clypeus, which is rare prior to his reign. These attributes again point to a date of production specifically in the reign of Sheshi and indicate that we are dealing with another son of his.

It may be noted that the seals of Nehsy display a proportionally larger number of the earlier attributes than those of Ipqu, which could be taken to indicate that he was the earlier of the two, if they were both sons of Sheshi as argued here. However, we are dealing with sample of limited size and since a king Nehsy is attested, while a king Ipqu is not, it seems likely that Nehsy was the later of the two and the successor of his father. This, in turn, might indicate that Ipqu predeceased his father.

8.5 Prince Quppen

The seals of the eldest king's son Quppen exclusively display notched legs and all but one mark the clypeus. These two attributes are first attested on the seals of Sheshi, but only occur on about 20% in his case. The consistent use of the first attribute and the dominant use of the second match the seals of Ya^cqub-Har and Khyan perfectly, and Quppen is likely to belong somewhere within the general period covered by the reigns of these kings. A single seal of Quppen uses the design consisting of three pairs of signs in the flanks. Also this attribute is first attested on seals of Sheshi and continues to be used by Ya^cqub-Har and Khyan. Perhaps more important, another seal uses concentric circles as decoration, an attribute only attested for Sheshi among kings. This might indicate a date closer to Sheshi and give weight to an association with Ya^cqub-Har rather than Khyan. Another piece of more circumstantial evidence may also point in that direction, sc. the fact that another eldest king's son named Yanassi (*ynss*) is associated with Khyan on a stele³⁸. However, neither of these arguments can be regarded as decisive in themselves.

8.6 Princes Apophis A and B

A group of five seals with the name Apophis are so different in their typological features that they must represent more than one individual. Two of them have grooved legs like most of the seals of king Apophis. These two seals further have in common that the title is written »king's son of Re«, that the name is written in a cartouche, and that the cartouche is written with double lines which is quite exceptional for the 14th and 15th Dynasties. One of the seals also has marked humeral callosities, a feature first attested on a seal of Apophis³⁹ and common during the 18th Dynasty. Accordingly, these seals are likely to date to the late 15th Dynasty and it is possible that this Apophis (>Apophis B<) is identical with the like-named king.

Among the other three seals, one has the sandwich profile and another has plain legs⁴⁰. The former does not occur after Sheshi in the main sequence, nor does the latter apart from a single example inscribed for Ya^cqub-Har. The two seals further use panels-with-crossbars and two pairs of scrolls designs, respectively, for the decoration of the base. Both of these attributes indicate a date prior to Ya^cqub-Har and, more specifically, the latter is attested only for ^cAmmu and Sheshi. Also worth noting is the fact that the seal with the panels-with-crossbars design is quite similar to

³⁸ Bietak 1981, 63–71.

³⁹ Cf. Hayes 1959, 6 fig. 2.

⁴⁰ Only the base of the fifth seal is published. It has three pairs of scrolls as decoration of the base and could pertain to either Apophis A or B.

a seal of Nehsy⁴¹. »Apophis A« might therefore be yet another son of Sheshi or the son of a close successor.

8.7 Princes Nebtjetjeru, *Ysrym*, Yakbim, and Ili-Milku

The eldest king's sons Nebtjetjeru and *Ysrym* are each attested by a single seal. Both have plain legs and the panels-with-crossbars design. The single seal of the king's son Ili-Milku similarly has plain legs, while a seal of the king's son Yakbim has the sandwich profile. These attributes indicate a date no later than the reign of Sheshi for all four princes. It is not possible to narrow down the date further on the basis of their typology alone. However, in the case of prince Yakbim it is an obvious possibility that he might be identical with the like-named king; in this case his seals would belong very early in relation to the main sequence⁴².

9 Seals of treasurers

9.1 Inclusions

Six treasurers are attested by seals that typologically match those of the kings of the 14th and 15th Dynasties⁴³. The names of the treasurers and the main diagnostic attributes of their seals are listed in the table 19.

9.2 The treasurer Rediha

The seals of Rediha exclusively use the sandwich and plain legs profiles, and the clypeus is never marked. This matches the main sequence up to and including Sheshi. Around half of the seals further use the panels-with-crossbars design, which is most common in the early part of the main sequence and gradually becomes less frequent, occurring on just 11 % of the seals of Sheshi. This indicates a date earlier than Sheshi, provided the seals of the treasurers followed the same general line of development.

The seals of Rediha are very similar to those of Peremhesut, but he is not attested with the title of royal seal-bearer. Assuming that the use of this title on seals represents a gradual development, Rediha belongs before Peremhesut, who uses the title on about 25 % of his seals. By contrast, the treasurers Har and Ibta, who are clearly later in date, consistently use the title on their seals. Rediha similarly does not use the title of sole friend which is attested for both Peremhesut, Har, and Ibta. A further indication that Peremhesut is later in date is the single attestation of notched legs, an attribute not attested prior to Sheshi in the main sequence.

⁴¹ Ägyptisches Museum Berlin, inv. 31344 and 32686 (neither published, personal examination). Both use panels for the decoration of the base, write the title *sz-nsw-r*^c, place the personal name in a cartouche, and add the epithet *di-nḥ*. They further have identical heads and plain legs, and both measure 16 × 12 × 8 mm.

⁴² The orthography of the name as written by the king's son (*ykbm*) and the king (*ykbmw*) differs slightly, but there are numerous documented instances of rulers who adopted new orthographies for their names for one reason or another. Apophis affords an example with *ipp* vs. *ippi*.

⁴³ The single seal ascribed to »Geba« remains problematic, since the name defies interpretation, but it is not an obvious corruption of the name of any of the other treasurers, and accordingly »Geba« is treated here as if a distinct individual. Quirke 2004, 179–181, suggests that seals of Rediha and Sadi were »by-products« of the Har seals (i.e. represent some form of corrupted writing based on those seals) and also entertains – and rejects – the idea that »Peremhesut could have been the Egyptian name for someone with their own Semitic name«, *in casu* also Har. He does not discuss the typology of the seals which, in my point of view, rules out these suggestions; thus, for instance, Har never uses the panels-with-crossbars design that is attested on about half of the seals of Rediha and Peremhesut.

Table 19 Main diagnostic attributes of the seals of treasurers

Identity	Size		Rank titles		Profile			Decoration of base					Back
	mm		royal seal-bearer	sole friend	sandwich	plain	notched	panels w. cross bars	blank	split	2 scrolls	3 scrolls	clypeus
Main group													
Rediha 10 seals	17.6		–	–	38% (3/8)	63% (5/8)	–	60% (6/10)	40% (4/10)	–	–	–	0% (8/8)
Peremhesut 35 seals	18.8		26% (9/35)	11% (4/35)	45% (13/29)	52% (15/29)	√ (1/29)	51% (18/35)	43% (15/35)	6% (2/35)	–	–	0% (0/32)
Har 133 seals	21.3		100% (129/129)	11% (14/129)	7% (8/103)	63% (66/103)	29% (30/103)	–	72% (93/129)	21% (27/129)	4% (5/129)	3% (4/129)	23% (28/123)
Ibta 3 seals	24.3		100% (3/3)	66% (2/3)	–	–	100% (2/2)	–	33% (1/3)	–	–	67% (2/3)	100% (3/3)
Secondary group													
»Geba« 1 seal	15.0		–	–	√ (1/1)	–	–	–	√ (1/1)	–	–	–	–
»Sadi« 2 seals	17.5		100% (2/2)	–	√ (1/2)	√ (1/2)	–	–	100% (2/2)	–	–	–	–

9.3 The treasurer Peremhesut

Nearly all the seals of Peremhesut use the sandwich and plain legs profiles, and half of them use the panels-with-crossbars design. In this respect they closely resemble the seals of Rediha but, as already noted, a single seal uses notched legs which are not attested prior to Sheshi in the main sequence. This indicates that Peremhesut belongs immediately prior to Sheshi or that his tenure may have continued into the reign of this king. It may further be noted that Peremhesut occasionally adds the titles of royal seal-bearer and sole friend, which are not attested for Rediha, but used by both Har, who is certainly contemporary with Sheshi, and the even later Ibta.

9.4 The treasurer Har

The seals of the treasurer Har match those of king Sheshi to such a degree that it can hardly be doubted they represent a contemporary production. Above all, the transition from the sandwich and plain legs profiles to the notched legs profile, which took place during the reign of Sheshi (tabs. 9. 12), is also reflected by the seals of Har, where 7% have the sandwich profile and 64% have the plain legs profile, whereas 29% have the notched legs profile. For Sheshi the corresponding numbers are 22%, 58%, and 21%. These figures match no other ruler, and the relatively high number of examples of the notched legs profile rules out a date prior to Sheshi, while the sandwich profile is not attested subsequent to his reign and the plain legs profile only once. The frequency of the marked clypeus, at 23%, similarly matches only the seals of Sheshi, where it numbers 21%. Prior to Sheshi the marking of the clypeus is extremely rare, while all but one of the seals of the later kings Ya^cqub-Har and Khyan display this attribute.

As for the decoration of the base, the seals of Har never use the panels-with-crossbars design, which is used on more than half of the seals of Rediha and Peremhesut. This attribute seems to disappear during the reign of Sheshi, since it is only used on 11% of his seals and not attested for Ya^cqub-Har and Khyan. Instead, the majority of Har's seals with decoration use the split design, where the inscription is balanced in two short vertical columns, separated by a stroke in the middle, with the titles written in the right column and the name in the left. This is a very rare design otherwise attested only a few more times among the more than 1,000 known private-name seals of the Second Intermediate Period. The remaining seals with decoration display either the two or three pairs of scrolls designs. The concurrent use of both designs corroborates the dating of the seals to the reign of Sheshi, since he is the only king for whom both are well-attested – the latter attribute being rare prior to Sheshi (just two examples) and the former rare subsequent to his reign (just one example).

In addition to the typological criteria, king Sheshi and the treasurer Har are attested together at a number of sites under circumstances that also indicate they were contemporary or at least very close in date. The archaeological contexts in question will be discussed in a separate paper.

9.5 The treasurer Ibta

The few seals inscribed for the treasurer Ibta are characterized by the use of the notched legs, the marked clypeus, and the three pairs of scrolls design⁴⁴. The two former attributes are first attested for Sheshi in the main sequence, but only occur on 21% of his seals, and the three pairs of scrolls design is even less common with just 3%. By contrast, nearly all seals of Ya^cqub-Har and Khyan display the notched legs and the marked clypeus, and more than two-thirds display the three pairs of scrolls design. The seals of Ibta are therefore likely to date after the reign of Sheshi and to be-

⁴⁴ The treasurer Ibta is possibly identical to a like-named individual who held the titles of royal seal-bearer and steward. He is attested by a single seal which similarly displays the notched legs, the marked clypeus, and the three pairs of scrolls design: Martin 1971, no. 108.

long somewhere within the general period spanning the reigns of Ya^cqub-Har and Khyan, i.e. the late 14th or early 15th Dynasty.

9.6 The treasurers »Geba« and »Sadi«

The two final treasurers to be discussed, »Sadi« and »Geba« (whose names may not be correctly deciphered), are only attested by one and two seals respectively, and it is therefore difficult to establish a specific position in relation to the four other treasurers.

The single seal of »Geba« has the sandwich profile which indicates a date no later than Sheshi. The absence of the title of royal seal-bearer suggests that he is earlier than Har, who uses this title consistently, and instead belongs with Rediha, who never uses the title, and Peremhesut, who only uses the title on about one-fourth of his seals.

The two seals of Sadi use the sandwich profile and the plain legs respectively, again suggesting a date no later than Sheshi. Both of his seals are inscribed with the title of royal seal-bearer. It is difficult to determine whether he belongs before or after Har, but he is likely to be later than Rediha and he is certainly earlier than Ibta.

10 Main conclusions

10.1 Typology, production, and workshop

The analysis of the one thousand seals of kings and high officials attributed to the 14th and 15th Dynasties reveals a broad and consistent set of typological features, and the typological seriation indicates a gradual and almost perfectly consistent development⁴⁵. Both circumstances points to a centralized production. Since virtually all the name-seals of the two dynasties in question are inscribed for kings and other members of what may be regarded as the ruling elite, it seems reasonable to assume that the center of production was associated with the palace and represents what might be termed a royal workshop⁴⁶. It is not possible to pinpoint a specific or even a general geographical location for the royal workshop on the basis of the seals themselves, but Tell el-Dab^a represents the obvious candidate for historical reasons. Whether the production remained at the same facility throughout the 14th and 15th Dynasties cannot be answered either. The seriation does not reveal any sudden changes that would indicate disruption caused by a change of facility or personnel, but the cutting of steatite scarab-shaped seals hardly required a level of specialization where such changes would necessarily be discernible.

10.2 General typological development

The typological seriation of the royal name seals displays a gradual and consistent development from simple towards more complex features (tab. 20). The numerous seals of Sheshi exhibit the most comprehensive changes and his reign can, by and large, be described as the dividing line between the earlier and later typology. This situation is more likely to be the result of an apparently long reign than any sudden events or deliberate decisions.

⁴⁵ Pace D. Ben-Tor in: Ben-Tor et al. 1999, 53, who argues that »designs and stylistic features of scarabs fail to establish a reliable chronological typology«.

⁴⁶ By contrast, D. Ben-Tor in: Ben-Tor et al. 1999, 62, argues that »the majority of these scarabs were not manufactured in royal workshops« on the basis of some examples of epigraphical and orthographical variation in the writing of royal names. She overlooks that the majority of seals in fact display consistent orthographies and ignores the typology of the seals altogether.

Table 20 Schematic outline of the general typological development of royal name seals

	Earlier	[Sheshi]		Later
Kingship	gradual assumption of cartouche gradual assumption of royal epithets			
Profile	simple profiles (sandwich, plain legs)		complex profiles (notched and grooved legs)	
Head	lack of marked clypeus		marking of clypeus	
Designs	simple designs (straight panels w. crossbars)	two pairs of scrolls two pairs of signs	three pairs of scrolls three or more pairs of signs	
Size	gradual increase in size (until Apophis)			

10.3 Seals and authority

Virtually all the name-seals that can be ascribed to the workshop tradition here under discussion, and to the 14th and 15th Dynasties in general, are inscribed for kings, kings' sons, and treasurers. Most of the king's sons are likely to represent the designated heirs to the throne, since the majority of seals pertain to individuals explicitly designated as eldest king's sons (tab. 18). Moreover, the treasurer (*mr-ḥtmt*) was the highest ranking Egyptian official during the 12th and 13th Dynasties, besides the vizier (*t3ty*) whose title does not seem to have been adopted by the 14th and 15th Dynasties. The 1,000 name-seals inscribed with the three titles in question may accordingly be seen to represent the highest ruling powers.

It is noteworthy that, as far as the seals are concerned, there were just two or three named individuals in the hierarchy of authority at any given time, the king and his treasurer, while the involvement of a designated heir or other king's sons may have been dependent on circumstances. Only a single queen is attested by seals, Tati, and she is therefore likely to represent an anomaly; perhaps she was the queen regent on behalf of a child king, but the exact explanation is less relevant (§10.11). The numerous other individuals who must have been involved in the administration of the 14th and 15th Dynasties remain entirely anonymous to us with only a few exceptions (§10.15). In this respect, the 14th and 15th Dynasties seem to have operated with an administrative system that was fundamentally different from the traditional and contemporary 12th and 13th Dynasties where a vastly more complex hierarchy of officials is attested, by seals as well as documents and monuments⁴⁷.

If the percentage of seals inscribed for each of the four categories of individuals in question roughly corresponds to the formal extent of their authority during the periods they represent, we would end up with a quantification that places the kings at 71 %, the treasurers at 19 %, the king's sons at 10 %, and the single queen at 1 % (tab. 21). The historical reality will undoubtedly have been much more complex. Power and influence may have been exercised in a number of ways that would not be reflected by seals and sealing practices. Moreover, it should further be emphasized that any conclusion based on the seals alone is unlikely to be representative of the 14th and 15th Dynasties as a whole. The majority of the seals in question seem to date to the 14th Dynasty, and even in the course of this dynasty, political changes may well have taken place.

⁴⁷ The literature on administration in the 12th and 13th Dynasties is extensive. For a general overview, see Grajetzki 2013. Individual titles are collected in Ward 1982 and Fischer 1997, and prosopographical information in Franke 1984 and Grajetzki – Stefanović 2012.

Table 21 Total number of seals by category

Overview			
Kings	700		71 %
– 14 th Dynasty	654	93.5 %	66 %
– 15 th Dynasty	46	6.5 %	5 %
Princes	96		10 %
Queen	11		1 %
Treasurers	184		19 %
Total	991		100 %

10.4 Distribution of main sequence royal name seals

The corpus of seals displays a very uneven distribution in relation to individual kings, with more than half of them dating to a single reign, i.e. that of Sheshi (§10.6). Tables 22 and 23 provide an illustration of the absolute figures and percentages for the kings included in the main sequence. While the number of extant seals of any specific king will be partly determined by the length of his reign, other factors must also be taken into account, such as the role of the seal in the historical context of the reign in question and vagaries of preservation and discovery. The present corpus indicates there is no fixed correlation between the extant number of seals and the length of reign from ruler to ruler. By way of example, Apophis Auserre is known to have ruled at least 33 years and 11 seals survive, which provides a minimum ratio of 1 : 3⁴⁸. Applying the same ratio to Sheshi Maaibre with 390 seals would yield a reign of 1,170 years or more. The impossibility of this figure requires no comment. Concerning this example, it should be noted that the reigns of the two kings are separated by some generations; Sheshi dates to the 14th Dynasty and Apophis to the late 15th Dynasty. The figures might be more comparable

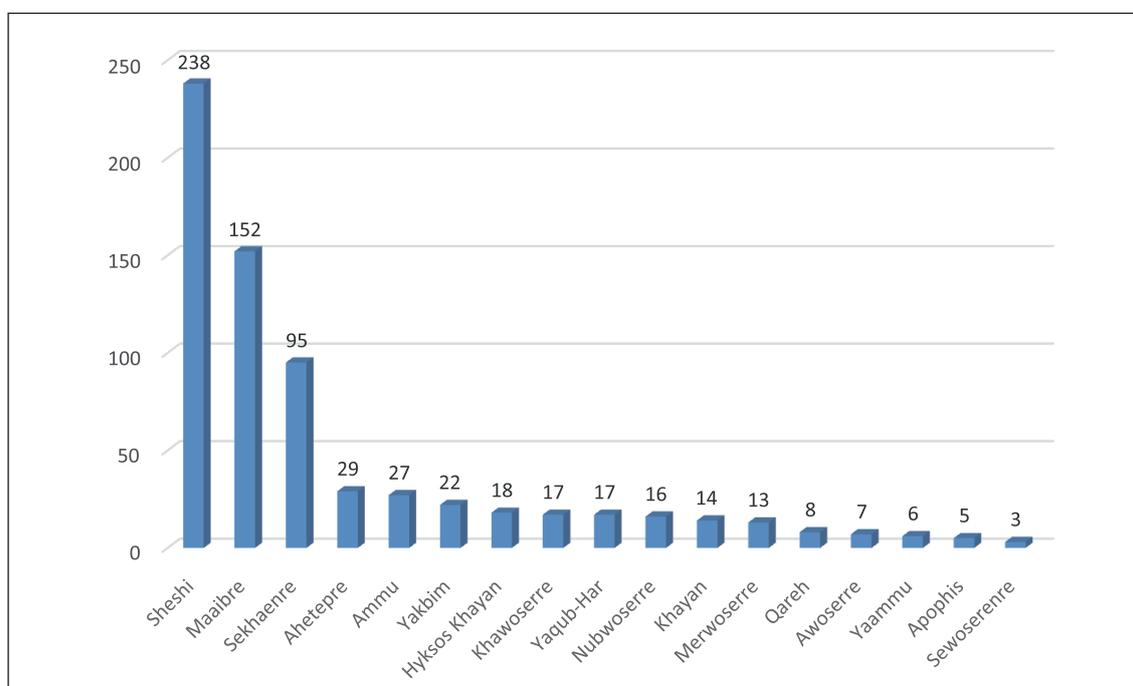


Table 22 Distribution of main sequence royal name seals in absolute figures

⁴⁸ Papyrus Rhind was written in the 33rd regnal-year of Apophis; cf. conveniently Helck 1983, no. 56.

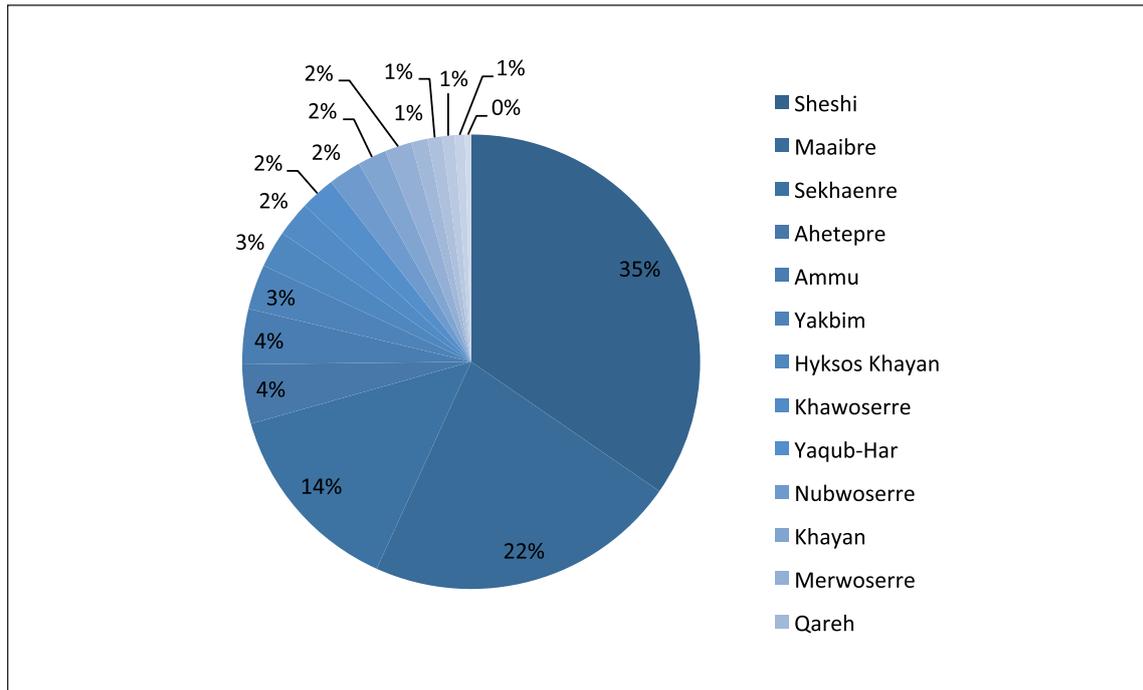


Table 23 Distribution of main sequence royal name seals as percentage

in the case of kings ruling within a shorter period of time. This remains difficult to test in the case of the 14th and 15th Dynasties⁴⁹. However, a comparison with the 13th Dynasty, for which a much better chronology is available, gives rise to caution; thus, for example, more than twice as many seals survive from the reign of Aya than that of his predecessor Ibiau in relation to the length of their reigns.

10.5 General comments on the 14th Dynasty

The 14th Dynasty likely emerged from the Levantine people who settled in the eastern Delta in the late 12th Dynasty, but the historical context remains largely obscure⁵⁰. According to the main sequence (tabs. 8, 11), the earliest attested king adopted the traditional Egyptian royal titles »Good God« and »Son of Re«, but he consistently avoided the use of the cartouche and royal epithets. Royal epithets are first attested for the next king in the sequence, mainly for the seals inscribed with his *prenomen* and less commonly for those inscribed with his *nomen*, perhaps because the former related specifically to his role as king. Subsequent to him, they are used on the vast majority of seals. Cartouches first appear sparingly under the fourth king and then gradually become more common. This gradual assumption of royal titles and other attributes indicates that full royal titulature was not simply adopted as a matter of course, and the situation finds an interesting historical parallel in the 11th Dynasty. The nature of the gradual manner in which royal attributes were adopted remains uncertain; perhaps caution in relation to the ruling dynasty at Memphis or the adoption of certain royal attributes might have been governed by specific rituals or other formal requirements.

⁴⁹ For a tentative attempt, cf. Ryholt 1997, 198–200.

⁵⁰ Bietak 2010, 163, argues that »the population of Tell el-Dab^a in the late Middle Kingdom and Second Intermediate Period came to a major extent from the northern Levant, most likely from the region of Byblos«.

10.6 Comments on king Sheshi

The reign of Sheshi is characterized by an enormous output of seals as compared to the other kings of the 14th and 15th Dynasties (and, for that matter, also in comparison with the kings of the 12th and 13th Dynasties). In addition to the numerous seals inscribed for the king himself, also the seals of the princes Ipqu and Nehsy and the treasurer Har, which can be shown to be contemporary through their typology, are preserved in considerable numbers. These four individuals absolutely dominate the three groups they represent; the seals of Sheshi constitute 56% of the total number of royal name seals for the entire 14th and 15th Dynasties, those of Ipqu and Nehsy constitute 71% of the seals of princes, and those of Har constitute 72% of the seals of treasurers (tab. 24).

Table 24 Increased output of seals during the reign of Sheshi

	Total/individual	Total/group	Percentage
King Sheshi	390	700	56%
Princes Ipqu and Nehsy	68	96	71%
Treasurer Har	133	184	72%
Total	591	980	60%

The apparent imbalance could be a result of administrative reforms, which involved an increase in the production and use of seals, but if this was the cause, or the sole cause, one might expect to find comparable absolute figures for at least some other reigns. Another possibility, which does not necessarily exclude the first, is that the larger number of seals was the result of a relatively long and stable reign. The lack of monuments inscribed for this king need not contradict such an explanation. It would be misleading to compare the situation to that of the contemporary 13th Dynasty, since the lack of monuments characterizes the whole 14th Dynasty and may be due to a number of factors⁵¹.

10.7 Comments on king Nehsy

King Nehsy stands out among the kings of the 14th Dynasty in several respects. He is the only king with an Egyptian name. While this in itself is noteworthy, the name represents a common designation for Nubians which is somewhat unexpected in relation to one of the foreign rulers in the Delta who are assumed to have had a Levantine origin. Whether this implies a fully or partly different ethnic background, a dark complexion, or something entirely different, cannot currently be established⁵². Moreover, the name Nehsy is associated both with an eldest king's son and a king, and each are attested by monuments in the eastern Delta as well as seals. The name of the king is further preserved in the Turin King List (§7.3).

Scholars have previously agreed that these sources refer to the same historical individual⁵³, but the identification has recently been challenged by Daphna Ben-Tor, since it is incompatible with her understanding of the chronology. Accordingly, she rejects the identification eldest king's son and king attested by the monuments with the king recorded in the King List as »speculative« and insists that there »is no evidence to support it«, thus in effect postulating a king Nehsy I and Nehsy II⁵⁴. She

⁵¹ Such as the cultural background of the 14th Dynasty, which may not have had a tradition of epigraphic monuments; the lack of stone in the Delta, which means that the rulers would have to either import it or re-use older monuments; and not least the fact that the Delta is less well explored and documented archaeologically.

⁵² In Ryholt 1997, 252–254, it is argued that Nehsy might be the product of a mixed marriage. The name of queen Tati of the 14th Dynasty is also attested in relation to one of the rulers of Kush and could therefore be Nubian in origin. Since the seals of both Tati and Nehsy are contemporary with those of Sheshi, it is possible – though it cannot be proven – that the latter king married a Kushite princess and that Nehsy was a son of theirs.

⁵³ Von Beckerath 1964, 83; Bietak 1984, 59–60; Yoyotte 1989a, 127.

⁵⁴ Ben-Tor 2007, 110.

proceeds to reject also the identification between the like-named eldest king's son and the king, and thereby suggesting that there was even a third historical individual with this name.

Several circumstances speak against this scenario. To begin with, it seems somewhat improbable that no less than three members of the 14th Dynasty in the Delta should be named »the Nubian« in the Egyptian language. More specifically, the seals of both the prince and the king display close similarities with those of king Sheshi and are likely to have been produced within a limited period of time (§7.3; 8.4). Each uses both plain and notched legs, which are otherwise rarely attested together, as well as the use of a cartouche and the three pairs of scrolls design. Other seals of the prince have the sandwich profile, which is not attested for the king, but this is not surprising, since it is an earlier attribute that effectively went out of use during the reign of Sheshi. Thus, the typology of the seals is entirely consistent with their attribution to a single individual. The seals of king Nehsy are, moreover, closely similar to the seal of Sekheperenre who is recorded as a successor of Nehsy in the king list (§7.4). I therefore see no merit in the suggestion that the seals pertain to different individuals from one another and from the king recorded in the King List.

10.8 General comments on the 15th Dynasty

While the rise of the 15th Dynasty has often been associated with apparently abrupt changes in the ceramic repertoire in the north of Egypt⁵⁵, there is no evident break in tradition as regards royal name seals. On the contrary, the seals of the early 15th Dynasty ruler Khyan are typologically similar to those of the 14th Dynasty rulers Sheshi and Ya^cqub-Har, and they continue the general line of development. This circumstance indicates that the 15th Dynasty took over where the 14th Dynasty left off, so to speak, as far as the production and use of seals are concerned. The seals accordingly provide no indication that the early 15th Dynasty might have overlapped with the 14th Dynasty, as it has sometimes been suggested, but rather suggest that the kings in the Delta form a single, continuous line, with the 15th Dynasty replacing the 14th.

10.9 Comments on king Khyan

An interesting aspect of the seals of Khyan is the fact that they fall into two groups, one with the title of Hyksos and another with the traditional titles of kingship. This situation is open to different interpretations. The two groups of seals might have been used concurrently or Khyan might first have ruled under the title of Hyksos and only later have adopted Egyptian titles of kingship. The recent discovery at Tell el-Dab^a of the impression of a seal inscribed for the »The Son of Re, the Hyksos Khyan« is significant, but does not settle the question⁵⁶. While it provides an unequivocal example of the simultaneous use of these titles, it might reflect a transitional phase. A circumstantial piece of evidence in support of the idea that the titles might reflect different stages of Khyan's reign is the relatively small group inscribed with his *pre-nomen* (3 seals). Most of the royal name seals are inscribed with his *nomen* (14 seals) which could be explained as the consequence of Khyan having originally become known by his personal name as »The Hyksos Khyan« (18 seals). It may, in other words, have been a deliberate choice to focus on his personal name rather than a newly adopted *pre-nomen*. However, the few monuments of the king are all inscribed with both names and hence show no preference for the *nomen*.

Table 25 Three hypothetical phases of Khyan's reign

First phase	Second, intermediate phase	Third phase
The Hyksos Khyan	The Son of Re, the Hyksos Khyan	The Son of Re Khyan The Good God Seuserenre

⁵⁵ Cf. Forstner-Müller 2003, 163–174.

⁵⁶ See I. Forstner-Müller – C. Reali in the present volume.

The possibility that Khyan originally ruled under the title of a Hyksos, effectively as a chieftain, raises the question whether this phase of his rule might have overlapped with the late 14th Dynasty and whether such a circumstance might have motivated the choice of the title of Hyksos rather than the use of royal titulary from the onset. Here the seals provide an important clue. The Hyksos seals of Khyan display the same sculpturing as his royal name seals and those of Sheshi and Ya^cqub-Har. The only discernible difference is the introduction of the protective cobras flanking Khyan's name, but this design is effectively a continuation of the use of three pairs of signs flanking the royal name, where the lower pair is replaced by the cobras (§6.1). This indicates that the Hyksos seals formed part of the same centralized production as the royal name seals of the 14th and 15th Dynasties which, in turn, implies that there was no overlap (or at least not a significant one) with the late 14th Dynasty and Khyan's rule as Hyksos. The reason for the Hyksos title must therefore be sought elsewhere, presumably in the origins of these rulers.

10.10 Comments on king Apophis

The seals of Apophis exhibit several similarities with those of Khyan (profiles, cartouche, epithets, decoration) and they fit into the general typological development of the 14th and 15th Dynasties. At the same time, there are some notable differences. The seals of Khyan display 82% notched legs and 12% grooved legs as against 17% and 83% in the case of Apophis. His seals are also visibly smaller than those of Khyan, about 20%, and they exhibit a range of royal titles that are not attested for any of the earlier rulers (§6.2), whereas none of them are inscribed with the title »Good God« which was used by all the earlier kings.

The small size of the seals and the apparent avoidance of the word »god« in reference to the king could in principle be taken to indicate a junior status in relation to the kings of the 17th Dynasty in the south, but the title »Good God« is in fact used on the monuments of the king. It is hypothetically possible that the monuments in question might belong to an earlier phase of Apophis' long reign, where he ruled a larger territory, and the seals to a later phase, where his territory had been diminished and he might have been forced into a subordinate status. However, the evidence provided by the Kamose texts also do not indicate that Apophis had assumed a subordinate status, at least by that date, and hence the adoption of different royal titles is likely to have been caused by other circumstances.

10.11 Queen Tati and the status of royal women

Queen Tati seems to have enjoyed an exceptional status as the sole royal woman of the 14th and 15th Dynasties attested by seals. The typology of her seals indicates that she was contemporary with king Sheshi, and she is so far the only royal woman who can be dated to the 14th Dynasty. Since virtually all other name-seals seem to refer to the highest authorities, it is possible that she played an active political role; she might have been the mother of a child king, but there are naturally other ways in which a woman could have gained political influence. The almost consistent writing of her name within a cartouche might reflect a deliberate decision to emphasize her authority in the light of an unusual situation, especially since the use of cartouches is quite exceptional for non-kings during the 14th Dynasty, even for the eldest king's sons (§10.12)⁵⁷.

⁵⁷ The situation may have been different by the reign of Apophis in the late 15th Dynasty, where we find the names of two royal women (the king's daughter Herit and the king's sister Tany) written in cartouches on two monuments: Helck 1983, nos. 80. 83. On another two monuments they are not (the king's sister Tjawat and the aforementioned Tany): Helck 1983, no. 82; Padró – Molina 1985. The name Tany also occurs in a cartouche on a stele from Tell Hebwa which depicts a king »Neh« presenting an offering to the god Mendes: Abd el-Maksoud – Valbelle 2005, 8–11 pl. 5. This monument poses several difficulties. The name of the king is presumably a corruption or short form of Nehsy in which case the stele dates to the 14th Dynasty. More curious is the fact that his name is not enclosed within a cartouche, like that of Tany, and that she is described as »his sister, the lady of the two lands«, but not

10.12 The status of king's sons

Among the seals of princes, more than three quarters (78%) are inscribed for five individuals with the title of *eldest* king's son (tab. 18). However, the actual proportion of seals pertaining to the senior sons seems to be even larger. As in other historical periods, the distinction *eldest* king's son was not consistently applied, and three of those four eldest king's son who are attested by more than a single seal are also found designated simply as king's son. Thus Nehsy is king's son on five seals and eldest king's son on seventeen, Ipqu is king's son on two and eldest king's son on forty-four, and Yakbim is king's son on one seal and eldest king's son on another. Assuming that we are not dealing with two like-named individuals in each case, which would seem an unlikely coincidence, this brings the total of seals pertaining to the eldest king's sons to at least 85% (82/96).

Yet also some of the individuals attested only as king's sons may have had senior status. This is indicated by their use of cartouches which is otherwise exceptional for princes⁵⁸. Perhaps by a curious coincidence, cartouches are not so far attested in combination with the title of eldest king's son, neither on seals nor monuments⁵⁹. They are, however, used on five seals where the title is simply king's son. These seals pertain to four individuals: Nehsy, Apophis A, Apophis B, and Seket. The rarity of the cartouche might indicate that also these princes had senior status, and this seems to be directly confirmed in the case of Nehsy who, as already mentioned, is attested as eldest king's son by many other seals.

Seeing that the majority of the seals of royal sons evidently pertain to the senior ones, and judging from the numbers, we are likely dealing with designated heirs who played a formal role in the government alongside their fathers. This interpretation is compatible with the fact that the number of princes attested by the seals is relatively limited and does not exceed that of the kings. Moreover, the names of three of the princes attested by seals directly correspond to the names of known kings; sc. Yakbim, Nehsy, and Apophis. While this does not necessarily constitute proof of identity, it can further be shown in the case of the two latter that the seals of the like-named princes and kings at least are near-contemporary.

Not knowing the vast number of the personal names of the kings of the 14th Dynasty (including almost the entire group recorded in column 8 of the Turin King List), it is possible that some of the other princes also became kings, but the matter cannot be determined without further evidence. Yet in a period characterized by very short reigns, it is impossible for the throne to have passed from father to son through more than one or two generations at a time. Moreover, whatever was the cause of the short reigns (violent coups, war, famine, disease [?]) is also likely to have affected the families of the kings, and even in peaceful times sons might naturally predecease their fathers. Thus, for instance, if the attribution of both of the eldest king's sons Ipqu and Nehsy to the reign of Sheshi is correct (§8.3–4), it seems an obvious possibility that the older son died before his father and the other son then assumed the status as the senior son. To judge from the numerous seals of Sheshi, his is likely to have been one of the few long reigns during the 14th Dynasty.

10.13 The identity of the treasurers

Six treasurers are attested by seals whose attributes are identical to those of the royal name seals of the main sequence. No alternative typological attributes are attested, and accordingly it seems a reasonable conclusion that the production of their seals was confined to the royal workshop.

actually depicted, and hence the possessive pronoun remains unexplained – or should the inscription be understood a nominal sentence, »His sister is the lady of the two lands Tany«?

⁵⁸ Cartouches are also exceptional for princes during the New Kingdom and Third Intermediate Period, and there are no examples prior to the Second Intermediate Period. Two rare examples from the 18th and 22nd Dynasties are Amenmose and Sheshonq, the eldest sons of Thutmose I and Sheshonq I respectively and presumably intended heirs to the throne; cf. Dodson 2014, 176 n. 32.

⁵⁹ Eldest king's sons are so far only attested in relation to two monuments. A kind of obelisk erected by the eldest king's son Nehsy was found re-used at Tanis: Helck 1983, no. 67; Yoyotte 1989a, 125–129 fig. 3. And the eldest king's son Yanassi is mentioned alongside Khyan on a stele from Tell el-Dab'a: Bietak 1981, 63–71.

The relative order of the four better attested treasurers can be established with some likelihood and is outlined, together with their approximate dates, in table 26. The order does not indicate direct succession. The table includes three further treasurers who are not so far attested by seals. The first is Ranisonb who served Merdjefare, a successor of Nehsy (§10.14). His position is based on the assumption that Nehsy was the son and successor of Sheshi (§7.3), in turn, which places Ranisonb sometime after Sheshi. The two others are Aperba^cal and *Ḥwr* who both served during the long reign of Apophis; their order remains uncertain (§10.14).

The attestation of no more than eight treasurers suggests the office was held by one individual at a time. This also seems to be the case during the 12th and 13th Dynasties⁶⁰.

Table 26 The order and approximate date of the six better attested treasurers

	Earlier 14 th Dynasty	Sheshi	Late 14 th Dynasty/ early 15 th Dynasty	Apophis
Treasurer	Rēdiha → Peremhesut	→ Har	→ Ranisonb → Ibta	→ Aperba ^c al / <i>Ḥwr</i>

10.14 The status of the treasurers

The small group of treasurers is attested by a total of 184 seals (tabs. 6. 19). This figure may be contrasted on the one hand with the fact that virtually no other officials of the 14th and 15th Dynasties are attested by name-seals, and on the other hand with the nearly 700 seals inscribed with the names of kings of the 14th and 15th Dynasties. The almost complete dearth of name-seals inscribed for officials other than the treasurer indicates that the latter enjoyed an exceptional status.

The fact that we find two examples of treasurers mentioned directly alongside kings, among the very few royal monuments of the 14th and 15th Dynasties, further illustrates their high status. The treasurer Ranisonb is depicted together with king Merdjefare on a stele, perhaps from Saft el-Henna⁶¹, while the name of Aperba^cal is inscribed alongside those of king Apophis and the king's sister Tany on a usurped offering stand of Senusret I⁶² and the name of *Ḥwr* alongside that of Apophis on a usurped sphinx of Senusret III⁶³. The stele is particularly interesting since it depicts the king presenting an offering to the god Sopdu and he is not just accompanied by the treasurer, who stands immediately behind him, but the latter is actively assisting in the ritual by playing the *sistrum*. It is highly unusual for an official to be seen in this role in Egyptian iconography.

Even more exceptional is a seal of the treasurer Ibta where his name is enclosed within a cartouche (fig. 9)⁶⁴. The use of the cartouche was otherwise a strictly royal prerogative which was rarely afforded even the senior royal sons (tab. 18, §10.12); as such it seems to imply a near-royal status on behalf of the treasurer. His seals are also larger than the bulk of the royal name seals from the 14th and 15th Dynasty; they are about 15 % larger than the seals of Ya^cqub-Har and Khyan with which they show the closest typological similarities (§9.5). Another seal of the treasurer is still set in its original gold mount⁶⁵.

We have no direct sources on the actual duties of the treasurers during the 14th and 15th Dynasties and that the translation is here used conventionally. The title (Egyptian *mr-ḥtmt*) may simply have been adopted as the highest ranking in the contemporary Egyptian hierarchy and hence most befitting the highest official in 14th and 15th Dynasty society, just as Egyptian titles of kingship were adopted for the rulers. The seals inscribed for treasurers such as Har, Peremhesut, and Re-

⁶⁰ Cf. Grajetzki 2000, 43–78; Grajetzki 2009, 43–66.

⁶¹ Yoyotte 1989b, 17–63.

⁶² Cf. conveniently Helck 1983, 57 no. 82, who reproduces only the initial part of the treasurer's name (Aper...). Part of the divine name Baal, the sign 𓁿 , is also preserved; cf. Krauss 1993, 28 fig. 2 (who reads the sign as *wr*). The name is preserved intact on a door-jamb discovered at Tell Hebwa: Abd el-Maksoud 1998, 271 pl. 1.

⁶³ Goedicke 1977, 10–12.

⁶⁴ Martin 1971, no. 109.

⁶⁵ Martin 1971, no. 110.

diha, are far too numerous to have been used by single individuals; in the case of Har at least 133 are known (tabs. 6. 19). This is also indicated by their geographical distribution; seals of Har have been found at Kerma and Debeira East in Nubia, at Esna, Deir Rifa, and Qaw el-Kebir in the Nile Valley, at Tell el-Yahudiya and Tell el-Dab^ca in the Delta, and at Tell el-Ajjul and Tell Fara in the southern Levant⁶⁶. The quantities and the wide geographical distribution imply that the seals were rather used on behalf of the treasurer by his staff⁶⁷. This would parallel the well-attested use of royal name seals by high officials, i.e. the royal seal-bearers, on behalf of kings. If this interpretation is correct, it would in turn indicate that a sizable staff of officials answered to the treasurer. As the senior official this is by no means unexpected.

10.15 Officials other than treasurers

Apart from treasurers, very few officials are attested by seals that are typologically similar to those here under discussion. In principle it is possible that seals of lesser officials would be produced elsewhere, and thus would display different attributes, but two circumstances speak against this possibility. On the one hand, there seems to be no obvious groups of seals inscribed for lesser officials that might be attributed to the 14th and 15th Dynasties. On the other, numerous non-epigraphical seals are in fact identical in their sculpturing to those here discussed. This indicates that the workshop had a much wider production than the name-seals.

More likely, then, the situation reflects an administrative regime where virtually all business that involved seals and sealing and required a direct identity (sc. a title and a name) would refer to the very top tier of the government, i.e. the kings, their treasurers, and at least sometimes also sons of the kings. Perhaps this situation reflects the background of the rulers. Little is known about their origin, but as already mentioned they likely emerged from the Levantine people who settled in the eastern Delta and who may have belonged to a society which lacked a formal hierarchy of government, as we know it from contemporary Egypt, and where writing played little or no role. At any rate, the situation reflected by the seals of the 14th and 15th Dynasties marks a clear contrast to the 13th Dynasty for which a much more complex, formal hierarchy of officials is attested. This should not be taken to indicate that lesser administrators or overseers did not use seals; the numerous non-epigraphical seals from the royal workshop may well, at least in part, have been produced for such individuals. The individuals do, however, largely remain anonymous.

The very few examples of officials other than treasurers with seals that match the typologies here under discussion include two stewards, Ibta and Simerit (*sz-mryt*, an Egyptian name), and an overseer of field-workers, Semerti (*smrti*, a foreign name). The seal of Ibta is very similar to those of the like-named treasurer with whom he is perhaps identical (§9.5). The two seals of Simerit and Semerti display the same sculpturing⁶⁸. The former uses a winged sun-disc as decoration, an attribute otherwise attested only for the princes Ipqu and Quppen (§6, tab. 15). It is noteworthy that the protective winged sun-disc should be used for an official, since it is normally used only for the king and his family on Egyptian monuments. The plain legs and unmarked clypeus of these seals indicate that they are no later in date than Sheshi.

10.16 The 15th Dynasty hiatus

After a period where seals inscribed for the royal family and high officials are used intensively, during the 14th Dynasty, they become much less common with the reign of Khyan and the 15th Dynasty. The seals of Khyan and Apophis represent less than 7% of the total number of royal name

⁶⁶ Ryholt 1997, 105–107.

⁶⁷ Steindorff 1936, 179–180; Ryholt 1997, 109. Cf. also Desplancques 2001, 124, who seems unaware the earlier discussions of these seals.

⁶⁸ Martin 1971, nos. 1299 (Simerit) and 1450 (Semerti). Quirke 2004, 183–184, interprets the title of Semerti as »overseer of marsh dwellers«.

seals of the 14th and 15th Dynasties (tab. 21), although both kings are generally believed to have had very long reigns. Apophis, whose reign certainly exceeded three decades, is attested by just 11 seals (§10.3). Seals of royal family members and treasurers are even rarer. Apart from two seals of a king's son named Apophis, who is perhaps identical with the king (§8.6), only two other individuals might date to the 15th Dynasty; the king's son Quppen (§8.5) and the treasurer Ibta (§9.5), whose seals match the relatively similar typologies of those of Ya^cqub-Har and Khyan.

That seals were no longer produced in large numbers for members of the royal family and high officials is further corroborated by the fact that a half dozen royal monuments of the 15th Dynasty are inscribed with the names of such individuals, but none of them are attested by seals. They include the eldest king's son Yanassi, who is mentioned alongside Khyan, and the king's daughters Herit and Tjawat, the king's sister Tany, and the treasurers Aperba^cal and *Ihwr*, who are all mentioned alongside Apophis⁶⁹. There are similarly no seals of the Hyksos king Seker-Har who is attested by a single monument from Tell el-Dab^ca⁷⁰.

10.17 Chronological implications of the hiatus

The phenomenon of an intensive production of seals inscribed for kings and officials (during the 14th Dynasty) followed by a dramatic decrease (from the early 15th Dynasty) in northern Egypt is matched by the situation in the Nile Valley to the south. In the course of the 13th Dynasty, for which a relatively good chronology is available, we can observe an intensive production of seals by kings and officials until the reign of Merneferre Aya in the late 13th Dynasty. After his reign, name-seals suddenly become very rare and hardly any seals of the later Theban kings of the 16th and 17th Dynasty are known⁷¹.

The similar patterns of development in the Delta and the Nile Valley invite consideration of the possibility that the two situations may have been linked chronologically and perhaps even causally. This is difficult to test, but an assumed parallel development would seem compatible with the chronological implications of two recently studied deposits of seal-impressions which indicate that both the 14th and the 15th Dynasties began earlier, in relation to the Egyptian dynasties in the Nile Valley, than hitherto assumed. Deposits from Uronarti and Edfu indicate that Sheshi was roughly contemporary with kings Djedkheperu and Khabau⁷², perhaps one third into the 13th Dynasty, and that Khyan was roughly contemporary with Sobekhotep IV, perhaps two thirds into the dynasty⁷³. A chronological shift would also provide an explanation for a recently published Tell el-Dab^ca sealing that preserves impressions from a seal of Ya^cqub-Har alongside those of an official of the 13th Dynasty; the latter cannot be dated precisely, but is unlikely to post-date Merneferre Aya⁷⁴. I shall not pursue the chronological implications further on this occasion; they will form the subject of a separate study currently in preparation.

Table 27 Hypothetical development of the use of name-seals during the Second Intermediate Period

	Period of intensive use of seals		Seals rarely attested	
Foreign kings in the Delta	whole Dynasty 14	Khyan	hiatus	Apophis
Egyptian kings in the Nile Valley	Dynasty 13 until Aya		hiatus, Dynasties 16–17	

⁶⁹ Yanassi: Bietak 1981, 63–71. Herit: Helck 1983, no. 80. Tjawat: Padró – Molina 1986. Tany: Helck 1983, nos. 82–83. Aperba^cal: Helck 1983, no. 82; Abd el-Maksoud 1998, 271 pl. 1. *Ihwr*: Goedicke 1977, 10–12.

⁷⁰ Bietak 1996, 65 fig. 52; Bietak 2004a, 150–152.

⁷¹ Certain examples include two seals of Monthemsaf, one of Sobkemsaf, and one of Kamose, the two latter in gold mounts: Ryholt 1997, 391 (Monthemsaf). 398 (Kamose). 401 (Sobkemsaf). I am unsure whether a group of identical seals inscribed *sw3gd-n-r^c* (one possibly *s^cnh-n-r^c*) are in fact royal, since they do not include royal titles or epithets: Ryholt 1997, 389–390 (Monthhotepi, Nebiryraw I).

⁷² Ryholt 2010, 109–126.

⁷³ Moeller et al. 2011, 87–121.

⁷⁴ Bietak 2004b, 49 fig. 10; Zeger 2009, 68; cf. further Shirley 2013, 536.

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Khyan's Place in History

A New Look at the Chronographic Tradition

The basic hypothesis that spurred this workshop is a proposed contemporaneity or close chronological proximity of king Sobekhotep IV of the 13th Dynasty and the 15th Dynasty Hyksos Khyan (correct ›Khayran‹¹), suggested by the presence of seals of the two rulers within the same closed archaeological context at Edfu². A corollary hypothesis to facilitate this synchronism is to place Khyan early and not late in the 15th Dynasty. The chronological implications of this new hypothesis would be significant, including a larger overlap of the two dynasties than traditionally assumed, a possible shortening of the Second Intermediate Period, and new parameters for its overall political situation. Some scholars such as Alexander Ilin-Tomich have recently challenged this synchronism hypothesis³; accordingly, the proposal made below to accommodate a contemporaneous or chronologically close rule of the two kings is contingent on the validity of the archaeological interpretation as advocated by Nadine Moeller and Gregory Marouard. This paper will look at these problems from the specific angle of the Egyptian chronographic tradition and then proceed to a broader evaluation of their chronological probability. It gives me a propitious opportunity to integrate ideas developed 20 years ago⁴ with more recent archaeological and epigraphic evidence. But let me start by reiterating a number of epistemological considerations – cautionary remarks on our evidence and what we are able to know:

(1) The evidence available to us is extremely fragmented. As a matter of principle, most historical reconstructions must be assumed to display a false coherence and to be partially fictitious⁵. Striking examples are the two Hyksos *Škrhr* (doorway jamb found in Tell el-Dab^ca and first published in 1994) and *H3mwtj* (attested only in the Turin Canon) who are not attested elsewhere (e.g., on scarabs) and could thus not possibly have been postulated by modern historiography. Interestingly, a late mention of *Škrhr* that corroborates the longevity of Hyksos traditions seems to be preserved in demotic Papyrus Carlsberg 642 where an impious ruler *Saker* is mentioned⁶. In this perspective, the discovery of seals of Sobekhotep IV and Khyan within the same closed archaeological context at Edfu should *prima facie* be seen as an indication of historical coherence.

(2) The later Egyptian chronographic traditions about the 13th and 15th Dynasties are of particular importance. For a time period devoid of sufficiently numerous monumental records that would allow us to determine the number, identity and sequence of kings associated with it, it gives us precisely that information. Strangely, historians of ancient Egypt have relied on that tradition

¹ Despite the name forms commonly used in Egyptology and the one adopted for this volume, it should be noted that the correct pronunciation of the name was probably *Hayrān* (»chosen one, best«; indicated also by the addition of an *r* hieroglyph to the older rendering of /t/ by <ꜥ> on a scarab; see Schneider 1998, 38–39).

² Moeller et al. 2011.

³ Ilin-Tomich 2014, 149–152; Bietak 2016.

⁴ Schneider 1998.

⁵ See recently Jansen-Winkel 2009; Gee 2010; Schneider 2015 and Schneider 2017.

⁶ Quack 2002, 47–48 (equated by Quack with Salitis, but *Škrhr* is certainly preferable, as suggested in Schneider 2006, 193 n. 122).

when it pertained to the 13th Dynasty but belittled it when the 15th Dynasty was concerned. Both in the Turin Canon and Manetho, the number of 15th Dynasty kings was just six. In the Turin king list, all entries but the last one (Khamudi) are lost. Traditionally, scholars mostly surmised a discrepancy between royal names in the epigraphic sources and those in the Manethonian tradition. They often dismissed the latter tradition as corrupted and unreliable when the epistemological situation should have cautioned them to instead take it at face value. Rather than accepting the Manethonian tradition, numerous scholars attempted to assign to the unpreserved portion of the 15th Dynasty in the Turin Canon kings named exclusively on scarabs. The attribution to that list of kings such as *Sheshi* and *Ya^cqubhaddu* (»*Yaqobher*«) and their sequence was justified by the distribution, frequency and typological seriation of their scarabs or else the appearance of the title *ḥqꜣḥꜣs.wt*⁷. E.g., Daphna Ben-Tor has professed the view that king *Ya^cqubhaddu* (»*Yaqobher*«) must be assigned to the 15th Dynasty because of the close stylistic similarity between his scarabs and those of Khyan⁸. On the other hand, the discovery of coincidental finds such as the *Škrhr* door jamb prompted scholars such as Kim Ryholt to also include this king within the 15th Dynasty, even though he is not at present attested by a single scarab. Such reasoning is, I believe, prone to failure from an epistemological perspective. More importantly, it can be avoided methodologically.

(3) The only way to reach firm chronological territory for the main sequence of kings in the 15th Dynasty is to prove the validity of the Manethonian tradition. On the basis of earlier attempts (William A. Ward and others), I attempted this as early as 1998⁹ and later reaffirmed it in more comprehensive assessments of the chronology of the Middle Kingdom and the Second Intermediate Period in 2006¹⁰ and 2008¹¹, an attempt that has seen little reception or critical engagement within our field¹². Instead of rejecting Manetho, my approach was to reckon with kings absent from our contemporary documentation and to account for textual mistakes in the process of the copying of the king lists by late scribes.

Such a critical analysis does not leave any lacunae that would need to be filled by recourse to scarabs. Those of Manetho's epitomists can be shown to be correct that place *Apophis* at the end of the dynasty. All names of this sequence (1. Salitis, 2. Bnon, 3. Apakhnan, 4. Iannas, 5. Archles/Assis, 6. Apophis) but one can be equated with names attested epigraphically. The one not attested so far (Bnon) owes his absence most likely to the coincidence of archaeological preservation¹³. It has to be noted that the Turin Canon apparently once listed a total of six rulers of this dynasty, including a last king named *Khamudi*, while the copyists of Manetho named six rulers but excluded this final king who was a contemporary of Ahmose¹⁴. In brief, the situation presents itself as follows¹⁵:

Hieroglyphic evidence	Copyists of Manetho	
a. Šarā-Dagan (Šꜣrk[n])	1. Salitis	> 36 years, 7 month
b. *Bin- ^c Anu (so far unattested)	2. Bnōn	> 44 years
c. (°Apaq-)Ḥayrān	3. Apakhnan	> 19 years
d. Yinaššī'-Ad	4. Iannas	> 50 years, 1 month
e. Sikru-Haddu ¹⁶ (demotic <i>Saker</i>)	5. Archlēs/Assis	> 49 years, 2 months

⁷ For the history of research, see Schneider 1998.

⁸ Ben-Tor 2007, 106.

⁹ Schneider 1998, 57–75.

¹⁰ Schneider 2006.

¹¹ Schneider 2008.

¹² Accepted, e.g., by Hornung 1999, XVI; Franke 2008.

¹³ For the following, see in detail Schneider 1998, 50–56.

¹⁴ Cf. Schneider 1998, 56 (if not in the name »Chamois« of the book of Sothis).

¹⁵ Schneider 1998, 74; Schneider 2006, 194.

¹⁶ The interpretation of major elements of these names such as offered by Ryholt 1997, 126–128 (particularly °pr and hr) reflects older positions (Albright) which can no longer be supported.

f. Apapi	6. Apophis	61 years
g. Ḥālmudī	– (not in Manetho)	
Total Turin Canon		108 or more (?) years
Total Manetho		259 years, 10 months

Note: In the discussion, Kim Ryholt emphasized that the Manethonian names must be derived from a contemporaneous, Ptolemaic pronunciation of the hieroglyphic names and mentioned as an example CTAAN, assumed to be misspelled from CIAAN and to be equated with Khyan. This idea, defended by H. Winlock in 1947 and J. von Beckerath in 1997, among others, posits a late pronunciation of <ḥ> as /š/. This is certainly possible although a pronunciation as /ḥ/ is just as feasible (cf. the variants *Kheops* and *Stufis*¹⁷). A strong argument in favour of identifying Apachnan with Khyan and his successor Iannas with Yinassi is the fact that Yinassi is indeed attested as Khyan's son.

Substantiating the validity of the chronographic tradition of the 15th Dynasty has important methodological implications.

(1) As far as chronology is concerned, this textual account takes precedence over other areas of evidence. In consequence, any diverging modern attempt, e.g., to assign kings documented on scarabs, such as *Maaibre Sheshi*, to the 15th Dynasty, needs to explain their apparent absence from the chronographic tradition, and not vice versa.

(2) In terms of the political landscape of Egypt, I do not deny the existence of a large number of additional kings that are attested exclusively on scarabs. However, they must most likely be explained by a political constellation that continues to elude us and that did not warrant those kings' inclusion within the 15th Dynasty. By no means is the chronographic tradition erroneous, rather it is our present historical reconstruction that is underdetermined and lacks coherence.

(3) Within the narrow chronological focus of this contribution that attempts to answer the basic hypothesis that has prompted this workshop, the reaffirmed Manethonian tradition is conducive to the Edfu evidence that points to a position of Khyan early and not late in the 15th Dynasty sequence. Many scholars have been of this view in the past, including Wolfgang Helck, William A. Ward, Detlef Franke, Manfred Bietak and Donald B. Redford¹⁸. Recently, both Daphna Ben-Tor (2007¹⁹) and Nadine Moeller (2011²⁰) have very rightly militated once again against the view that Khyan was a predecessor of Apapi at the end of the 15th Dynasty. Their contention, however, that there is »no secure place for Khyan in the 15th Dynasty«²¹, is not necessarily true. The element *Khnan* listed at the third position of Manetho must in all likelihood be equated with *Khyan* (with a frequently attested misspelling of the Greek majuscules IA as N in the course of the manuscript tradition), as proposed by scholars such as Wolfgang Helck, Manfred Bietak, Claude Vandersleyen and corroborated by myself more thoroughly in 1998²². Before I return to the question of what this means in terms of the chronological distance between Khyan and the early 18th Dynasty, and the overlap of Dynasties 15 and 13, I would like to shed a closer look at Sobekhotep IV and the 13th Dynasty.

Fortunately enough, the sequence of kings of the 13th Dynasty is well-preserved in the Turin Canon and thus, little contested in modern research. Reign lengths are extant for at least a number of the late 13th Dynasty kings. According to the Turin King List and recent studies, Sobekhotep IV was followed by three successors, Sobekhotep V, Ibiau und Merneferre-Aya. Merneferre-Aya was the last 13th Dynasty king attested both in the north and the south, before the country is believed

¹⁷ Gundacker 2013, 48.

¹⁸ See Schneider 1998, 58–70.

¹⁹ Ben-Tor 2007, 109.

²⁰ Moeller et al. 2011, 107.

²¹ Ben-Tor 2007, 109.

²² Schneider 1998, 58–75.

to have disintegrated²³. The Turin Canon indicates a total of 39 years for these three successors. After them, approximately 25 rulers succeeded each other on the throne of the 13th Dynasty, and as most scholars have assumed, in rapid sequence. For the first of these kings, reign lengths between two and five years are preserved in the Turin Canon so that a total of some 50 years seems plausible for all 25 rulers if we can assume short reigns of approximately a year for most of the remaining incumbents. This figure is also supported by the preserved reign lengths until Merneferre-Aya which account for at least 100 years, in conjunction with a likely total length of the dynasty of 153 years that can be inferred from Manetho²⁴. It follows that a minimum of some 90 years (39+50) must be accounted for between Sobekhotep IV and the end of the 13th Dynasty. The distance between Sobekhotep IV and the early 18th Dynasty can be estimated thanks to the genealogy of the governors of Elkab. This genealogy is interlaced with the royal families of the Second Intermediate Period so that there are synchronisms with reigns of the 13th Dynasty (Sobekhotep IV himself!), the 17th, and the 18th Dynasty. According to Chris Bennett's meticulous assessment, we have to account for a minimum of eight generations between Merhetepre Ini, the successor of Merneferre-Aya and first king after Egypt's disintegration, and the reign of Amenhotep I²⁵. These chronological parameters are difficult to invalidate. They present as much a desirable grid for the chronology of the Second Intermediate Period as they constitute a challenge for the interpretation of the evidence from Tell Edfu.

In what follows I will present three different chronological scenarios. The first one is negative, forcing us to conclude that a proposed contemporaneity or close chronological proximity of king Sobekhotep IV of the 13th and king Khyan of the 15th Dynasty is precluded by the known data. By adjusting one key parameter, I will then suggest two alternative scenarios. They will, on the very contrary, determine that a close proximity or contemporaneous rule of the two kings is indeed feasible, that this is in accordance with the evidence, and thus historically coherent.

Scenario 1: I maintain for all three scenarios that Khyan was the third ruler of the 15th Dynasty. The first scenario operates with the total of 108 years that the Turin Canon has conventionally been believed to give as the sum of the dynasty's reigns. We know neither how long Khyan's two predecessors ruled nor when exactly the 15th Dynasty came to an end in the reign of Ahmose. We know for sure that the final years of the reign of Apapi (Apophis) and the beginning of Ahmose's reign overlapped. Relief fragments from the court of Ahmose's pyramid temple at Abydos that depict his campaign against Avaris name Apapi²⁶, and there seems to have been some interdependence of Ahmose's and Apapi's titulary names²⁷. The kingship of the last Hyksos Khamudi thus entirely fell within that of Ahmose. In which of Ahmose's regnal years Khamudi's reign ended, is unclear. The well-known note on the verso of the Rhind Mathematical Papyrus mentions that in the 11th year of the ruling king, Heliopolis was conquered, and that »he of the South« attacked and conquered Sile. Since »he of the South« must denote the Theban ruler Ahmose, the regnal year 11 can only be assigned to the successor of the Hyksos king Apapi: Khamudi²⁸. According to the name of a warship used by Ahmose, Memphis had at that time been conquered, and it is possible that Avaris surrendered to Ahmose not much later. An inscribed spear point from the booty of Avaris was long believed to provide a dating criterion through the orientation of the lunar hiero-

²³ Schneider 2006, 180; Ben-Tor 2007, 187; Grajetzki 2015, 310.

²⁴ For the discussion of the length of the 13th Dynasty, see Schneider 2008, 309.

²⁵ Bennett 2006, 240; additions to the discussion in Davies 2010. During the conference, Ryholt advocated that we could be dealing with as few as six generations. Even this assumption would make the scenarios 2 and 3 below more likely than scenario 1.

²⁶ Harvey 1998; Spalinger 2013, 103.

²⁷ E.g. Schneider 1998, 73; in a wider context, including Kamose's titulary, Harvey 2007, 344–346.

²⁸ Franke 1988, 263; Bietak 1994, 29; von Beckerath 1994, 115; Spalinger 2001, 299. Ryholt is opposed, but proceeds *a priori* from a short reign for the last Hyksos king; likewise, Kitchen 2000, 39–52, esp. 45–46 (who also considers assigning the date to the last Hyksos).

glyph which would place the conquest of the city between Ahmose's year 18/19 and 22²⁹. The criterion has recently been put into question by Kenneth Kitchen, Kim Ryholt and Daniel Polz³⁰ but again been endorsed by Stephen Harvey³¹. Another possible check is provided by a graffito in the quarry at Tura whereby »oxen from Palestine« were used at the opening of the quarry in Ahmose's regnal year 22³². The cattle could have been brought to Egypt after the three-year siege of south Palestinian Sharuhén, which followed the conquest of Avaris, but equally at any later date. New evidence provided by Stephen Harvey's excavation of Ahmose's pyramid complex at Abydos shows that Ahmose adopted a new personal name *Heqataui*, »ruler of the two lands«, most likely either as a political claim to Egypt during his campaign against the north or else, to celebrate the achieved victory³³. The temple appears to have been decorated rather late in Ahmose's reign, although the precise time span between the defeat of the Hyksos and the decoration of the temple is unclear. On the assumption that there was at least a minimal overlap of Apapi's and Ahmose's reigns and that the ultimate defeat of the 15th Dynasty must have occurred at the latest in Ahmose's 22nd year, we get a 10-year window for the end of Khamudi's reign (Ahmose's regnal years 12–22).

In my following calculations, I am using the year 1550 B.C. as a convenient reference point for the start of Ahmose's reign. The correct absolute date is not essential for our purpose which only evaluates the proposed contemporaneity or close proximity of Khyan and Sobekhotep IV. With 1550 as a reference point, the 10-year time window for the end of Hyksos rule falls into 1538–1528 B.C. By adding to it the 108 years – the length of the 15th Dynasty as conventionally assumed for the Turin King List –, we arrive at 1646–1636 B.C. for the seize of power of the 15th Dynasty. It is then safe to assume that Khyan's reign as the dynasty's third king would have to be placed somewhere between 1640/1630 and 1600. I must add here for the sake of clarity that we are not at present in a position to assign Khyan (or his two predecessors, for that matter) a reign length. Manetho gives figures for every individual ruler; however, those reign lengths add up to 259 years and 10 months and must thus be partially incorrect. While Jürgen von Beckerath, in his 1997 »Chronologie des pharaonischen Ägypten«, proposed a hypothetical reign length for all kings assigned by him to the 15th Dynasty³⁴, it remains a matter of utter speculation to determine which of the reigns were lengthened by Manetho and by how much. On an unnumbered fragment of the Turin Canon that may belong to the 15th Dynasty³⁵, we encounter traces of the totals of two reigns: »10 (or 20, or 30)« + x years and »40« + x years. The latter could hypothetically be assigned to Apapi, who according to the colophon on the Rhind Mathematical Papyrus reigned at least 33 years. The first reign might then be assigned to *Skr-Hr* who in my reconstruction was the predecessor of Apapi³⁶. However, for Khyan, no regnal years are attested.

With a placement of Khyan within 1640/1630 and 1600, it becomes instantly clear that this outright precludes the proposed contemporaneity of Khyan with Sobekhotep IV. As we noticed, we have to account for some 90 years between the end of Sobekhotep's kingship and the end of Dynasty 13. This would entail the unlikely consequence of the 13th Dynasty lasting into or even beyond the reign of Ahmose. At the same time, the family tree of the governors of Elkab requires a minimum of eight generations (but see n. 25) between year 1 of Merhetepre-Ini, the successor of Merneferre-Aya (39 years after the death of Sobekhotep IV), and the reign of Amenhotep I. Even if we place Khyan near the very beginning of the 15th Dynasty (1645 B.C.), and if we further assume that his start of reign coincided with the end of Sobekhotep's, and also include the entire reign of Amenhotep I in the last generation of the Elkab genealogy (with 1550 = Ahmose 1, his reign

²⁹ Vandesleyen 1971, 205–228; Franke 1988, 264.

³⁰ Kitchen 2000, 39–52, esp. 46; Ryholt 1997, 186–187 n. 669; Polz 2007, 15.

³¹ Harvey 2007.

³² Franke 1988, 264.

³³ Harvey 2008, 143–155; Harvey 2007.

³⁴ von Beckerath 1997, 137.

³⁵ Ryholt 1997, 118–119.

³⁶ Contra Ryholt 1997, 119.

would end in 1504), we get a length for one generation of just 12 years and 9 months. This makes the correlation entirely impossible. If we allow for several years for the first two 15th Dynasty kings and also opt for an earlier end date of the Elkab genealogy within the reign of Amenhotep I, we arrive at even shorter intervals of just 10 years.

Scenario 2: The only way to prevent that negative conclusion is to reckon with a significantly longer 15th Dynasty. In the Turin King List, the partially preserved sum for the dynasty was believed to read »108«. In 2005, Kim Ryholt carried out a re-evaluation of the Turin notation that, very unfortunately, has remained unpublished. I am grateful to Kim Ryholt for having sent me his 2005 paper³⁷. The dynasty sum in the Turin papyrus is only partially preserved and reads (fig. 1):



Fig. 1 Facsimile of the recorded duration of the 15th Dynasty in the Turin King List

Kim Ryholt shows conclusively that the notation might be a writing of the number »108« (b) with a skewed upper line but that this would be exceptional for the Turin Canon and more so for this particular section of the king list (where the regular writing is [c]). He considers it as inevitable to assume that in all likelihood, the notation is to be understood as »140« (a), after which 0–9 units may once have been added but are now lost (fig. 2). The total length of the 15th Dynasty would thus likely have been between 140 and 149 years.

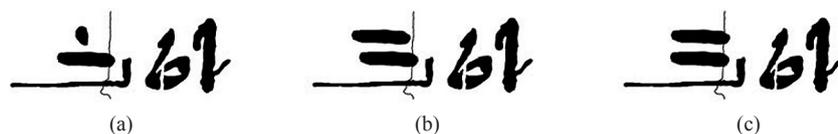


Fig. 2 (a) possible – (b) possible – (c) not possible

The chronological significance of this new reading is paramount as it increases the length of the 15th Dynasty by 32–41 years. Let us see how applying this new figure will change the previously made calculations. If we start again from the 10-year time window for the end of Hyksos rule, 1538–1528 B.C., we arrive at a year range for the beginning of the 15th Dynasty of 1687–1668 B.C. With an identical time frame for the reign of Khyan as the one suggested in scenario 1, we arrive at a date range for him of 1681–1638 B.C. This translates into a generation length of 17.25 years for the first year in that range, 1681 B.C. Placing Khyan at the very beginning of the dynasty, 1687 B.C. (a placement not supported by the chronographic tradition, as I believe), would increase the length for each of the required eight generations to 18 years ([1687–1504–39]:8). Genealogical models for Egyptian chronology were traditionally based on estimates of 25±5 years. While recently scholars such as Karl Jansen-Winkel³⁸ have suggested a higher generation average of about 30 years, such a conjecture can evidently be wrong in a given historical context and should not be applied if other data support a shorter estimate. The distance between Sobekhotep IV and Merhetepre Ini which is 39 years and equals two or even

³⁷ Ryholt (unpublished).

³⁸ Jansen-Winkel 2006, 265–271.

three generations, indeed favors the adoption of a shorter estimate in our scenario. At any rate, a close temporal proximity of Sobekhotep IV and Khyan becomes just feasible with this second chronological option.

Scenario 3: A third scenario seems feasible that relies on yet another restitution of the notation of the 15th Dynasty total in the Turin King List. Two further writings of tens in 19th Dynasty hieratic comprise of a protruding line (of which the tip would just be preserved above the »100« numeral) and in their case, not one but three and four vertical strokes above it: »60« and »80«. As in the case of the single vertical stroke for »40«, they are slightly removed backward from the tip of the protruding line and would thus no longer be visible on the preserved papyrus fragment³⁹. In both cases, units 0–9 may have followed. Compare the two new options, superimposed on the preserved traces of the total (fig. 3):



Fig. 3 (a) possible »160« – (b) possible »180«

A cumulative reign length of 160–169 or 180–189 years, respectively, for just six kings (or seven, given the mutual exclusion of one Hyksos in both the Turin King List and Manetho) is well attested in the 12th Dynasty and the first part of the 18th Dynasty. It should therefore not surprise us as a probable time span for the 15th Dynasty which, barring the late conflict with the 17th Dynasty, appears to have been a time of political stability. With the two potential readings, the parameters for the chronological scenario are as follows: From the 10-year time window for the end of Hyksos rule, 1538–1528 B.C., we arrive at a start range for the 15th Dynasty of 1707–1688 B.C., or 1727–1708 B.C. Both calculations work well with the prevailing chronological assumptions for the 13th Dynasty whose loss of political control over the whole of Egypt seems to have occurred in the last third of the 18th century B.C. With an identical time frame for the reign of Khyan as suggested in scenarios 1 and 2, we arrive at a date range of (a) 1701–1658 B.C., or (b) 1721–1678 B.C. for Khyan. This translates into generation lengths of between 14.375 and 19.75 years for a total of 160–169 years, and between 18.875 and 22.25 years for a total of 180–189 years. Both alternatives allow for some latitude regarding the end of the Elkab genealogy in the reign of Amenhotep I. These options become even more feasible if the Elkab genealogies point to a distance of 6 or 7 instead of 8 generations (see n. 25). Scenario (3) appears to offer the most viable solution to the chronological conundrum presented by the Edfu evidence – if the evidence can indeed be interpreted as proof of contemporaneity or chronological proximity –, and should thus be given serious consideration.

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³⁹ During the discussion, Kim Ryholt refuted these two proposed reconstructions of the original sum as not feasible both for palaeographic reasons and for lack of space. The preserved sign rests in the facsimile shown by Ryholt are, however, rather low and would thus make the suggested reconstruction worth considering. I owe these observations to Roman Gundacker as I was not able to attend the conference myself.

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Josef Wegner

Woseribre Seneb-Kay

A Newly Identified Upper Egyptian King of the Second Intermediate Period

In January of 2014 excavations near the mortuary complex of the 12th Dynasty king Senwosret III at South Abydos revealed the decorated tomb of king Woseribre Seneb-Kay, a previously unknown ruler of the Second Intermediate Period¹. The identification of this king through the discovery of his tomb at Abydos raises a host of questions regarding the political and dynastic structure of Upper Egypt during the Second Intermediate Period. Significantly, the tomb of Seneb-Kay is not the aberrant burial of just one Second Intermediate Period king who chose Abydos as his burial site. Seneb-Kay's tomb belongs to a larger cluster including at least eight Second Intermediate Period tombs of comparable size and design to that of Seneb-Kay. Although Seneb-Kay's tomb is the only decorated example in this group, the evidence suggests all eight represent burials of a series of closely associated Second Intermediate Period kings. Who was Woseribre Seneb-Kay and how does he relate to the historical structure of Egypt's Second Intermediate Period?

The Second Intermediate Period cemetery to which Seneb-Kay belongs is located adjacent to two preexisting 13th Dynasty royal tombs: S9 and S10 (fig. 1). The necropolis as a whole represents an extension to the already developed mortuary complex of Senwosret III, and the tomb enclosure of Senwosret III at the base of the site called *ḏw-ʿInpw*, or Anubis-Mountain². The tomb of Seneb-Kay, tomb CS9³, is positioned just ten meters in front of tomb S10, a structure which belongs to one of the Sobekhotep kings of the late Middle Kingdom (here referred to as Sobekhotep N⁴). The main group of Second Intermediate Period tombs are located slightly further northwards in a cluster that suggests they were built with respect to preexisting enclosure walls associated with the two 13th Dynasty tombs. Apart from three shafts (CS12–14), this Second Intermediate Period necropolis includes seven additional tombs (CS4–11) of similar design to Seneb-Kay⁵.

The tombs employ a predominantly passage-style design consisting of a walled entrance ramp descending from the surface to a sequence of either two or three chambers. The tombs are all entered from the west (Nile north) and descend towards the east (Nile south). In most examples the burial chamber is a vaulted brick chamber with a stone slab-lined interior (tombs CS4, 5, 7, 8 and 11). In two cases (tombs CS6 and 10), rather than slab lining, the burial chamber consists of a monolithic sarcophagus set beneath a brick vault. In tomb CS6 a most impressive phenom-

¹ Excavations at South Abydos are conducted by the Egyptian Section, Penn Museum and the University of Pennsylvania as part of the combined Pennsylvania-Yale-Institute of Fine Arts Expedition to Abydos. Thanks to the Egyptian Ministry of State for Antiquities for support of the fieldwork at South Abydos. I wish to thank Irene Forstner-Müller and Nadine Moeller for organization of the workshop on the reign of the Hyksos ruler Khyam and for inclusion of this article in the present volume. This paper represents observations made after the initial discovery of the tomb of Seneb-Kay in 2014. For recent results and the final publication of the Second Intermediate Period necropolis at South Abydos: Wegner – Cahail 2019 (forthcoming).

² For a discussion of the *ḏw-ʿInpw* site see particularly: Wegner 2007, 15–46, 365–382; Wegner 2009, 103–114.

³ In the recent work at South Abydos, Second Intermediate Period tombs have been assigned the designation »CS« for Cemetery S, following the system originally used by Weigall in 1901/1902, and assigned numbers following the order of excavation.

⁴ Quite likely tomb S10 is the burial of Sobekhotep IV: Wegner – Cahail 2015.

⁵ Further observations are presented in Wegner 2015, 68–78.

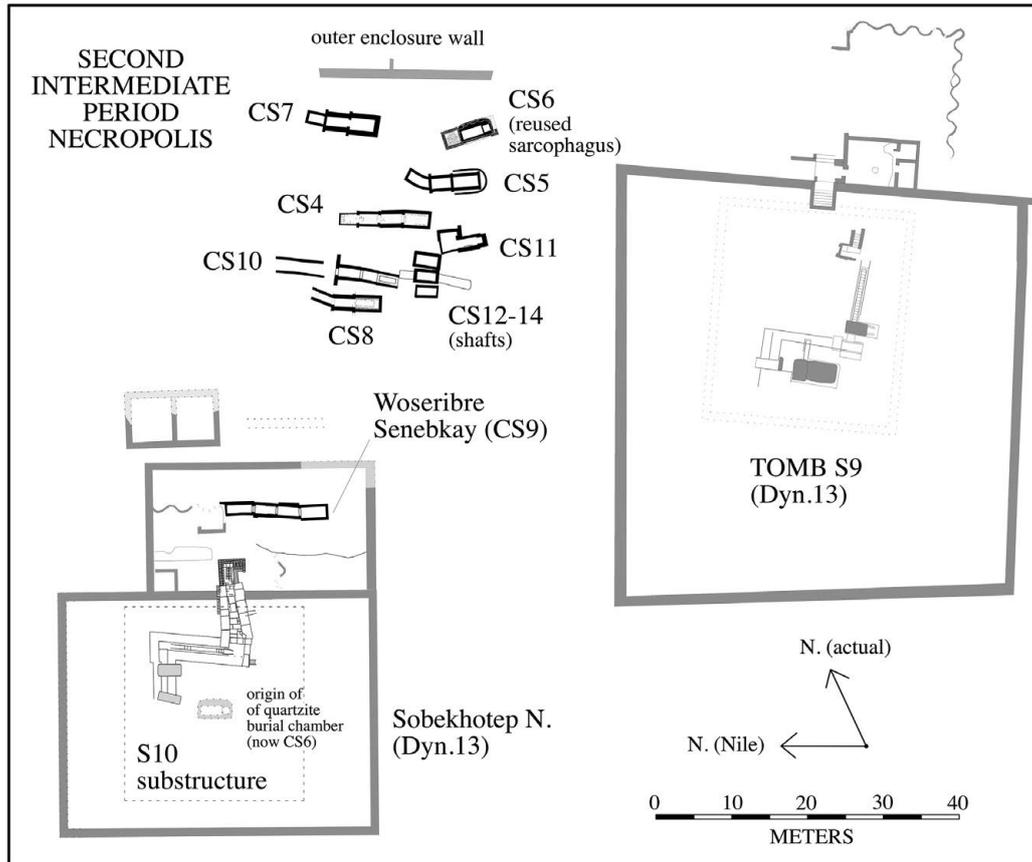


Fig. 1 General plan of the Second Intermediate Period tombs at South Abydos showing the location of the necropolis adjacent to preexisting 13th Dynasty royal tombs (© J. Wegner)

enon occurs in the reuse of a massive, ca. 60-ton quartzite chamber that had been extracted from beneath the neighboring 13th Dynasty S10⁶. Structurally, the largest of the Second Intermediate Period tombs is CS10 which shows distinct similarities with Seneb-Kay but, like CS6, employed a monolithic burial chamber. None of the tombs shows clear evidence of having had superstructures.

In terms of its architecture, construction techniques, as well as overall scale (overall length of 13.5 m) the tomb of Seneb-Kay is closely comparable to the other tombs (fig. 2). The structure is constructed of mudbrick with its interior surfaces mud-plastered and white washed. At the lower end of its walled entrance ramp is a small limestone portcullis that provides access to the interior. The tomb's interior consists of a sequence of three chambers: two brick chambers stepping down to reach a stone-built burial chamber. The first chamber, the ›pole-roof chamber‹ is roofed with wooden beams. Within this chamber in 2014 we discovered the remnants of Seneb-Kay's burial equipment including parts of his painted wooden coffin, funerary mask and canopic chest. Strewn on the floor among these remains of his burial was the disarticulated skeleton of Seneb-Kay⁷. The body of Seneb-Kay along with his funerary equipment had been pulled out of the burial chamber by ancient robbers and lay discarded on the floor of the tomb's first chamber.

Although the burial chamber itself preserved no further remnants of the king's burial equipment, the chamber is the most significant feature of the tomb and is the primary element that distinguishes Seneb-Kay from the rest of the Second Intermediate Period tombs. Seneb-Kay is the

⁶ For an overview of the discovery: Wegner – Cahail 2014, 19–23; and Wegner 2014, 18–25.

⁷ The body of king Seneb-Kay was originally mummified but was skeletonized through an interval of time between the death of the king and his mummification, as well as the subsequent damage caused by tomb robbers. For discussion of the king's remains and evidence for the king's death in battle see Wegner 2015, 76–77; and full presentation of the osteological analysis in Hill et al. forthcoming.

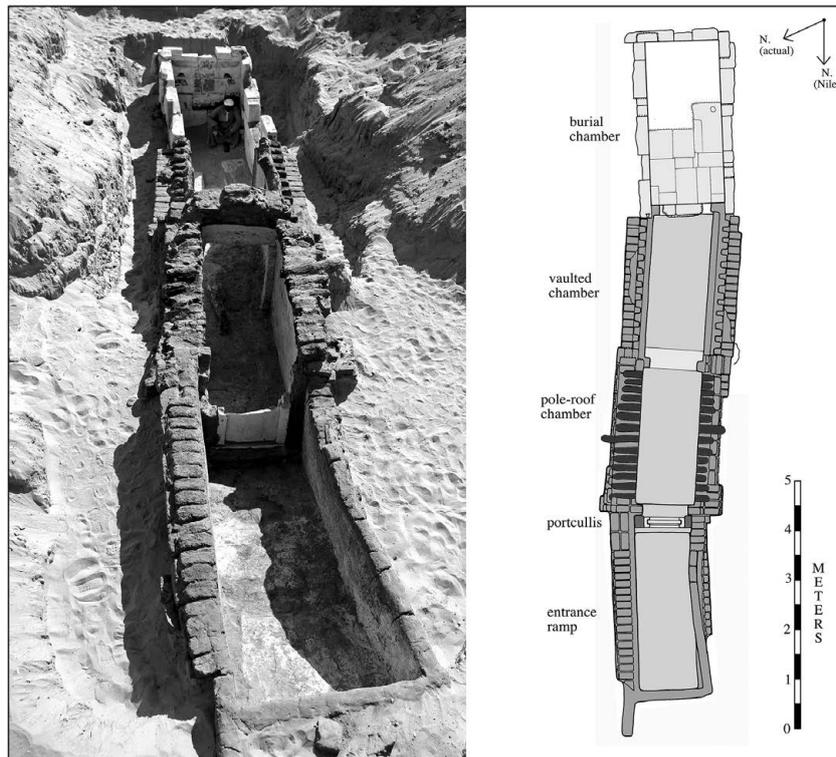


Fig. 2 Photograph and groundplan of the tomb of Woseribre Seneb-Kay (© J. Wegner)

only tomb of the group to employ a burial chamber composed of limestone block construction. These blocks are all reused and derive from elite mortuary chapels of the mid-late 13th Dynasty⁸. Relief carving on the blocks was chiseled down and covered with a facing of gypsum plaster to create a smooth surface for the painted decoration. Seneb-Kay's burial chamber also is the only one of the group to preserve painted texts and wall imagery which establish the identity of its royal owner.

Decoration on the two side walls includes depictions of two standing goddesses with their arms upraised. In the center of each wall occurs a winged sun-disk below which is the nomen (south wall) and prenomen (north wall) of Seneb-Kay⁹. On the chamber's inner (east) wall is a painted false door panel flanked by two further goddesses identified in the associated labels as Neith and Nut. Texts associated with the four goddesses are variations of magical spells that occur on contemporary canopic equipment. Additionally, four vertical text bands on the two side walls invoke the four sons of Horus and provide the fullest statement of the identity of king Seneb-Kay (fig. 3):

Nṯr nfr nb t3wy nb irt ht ny-swt-bity (Wsribr^c) s3 R^c (Snbk3y) m3^c-hrw

»The good god, Lord of the Two-lands, Lord of ritual, King of Upper and Lower Egypt Woseribre, son of Re, Seneb-Kay, justified.«¹⁰

Prior to the discovery of his tomb at South Abydos, Woseribre Seneb-Kay was an entirely unknown king. Apart from the king's tomb and its contents there exists just a single object which can

⁸ For an overview of the decoration on these reused blocks which derive from 13th Dynasty elite mortuary chapels, see Cahail 2015.

⁹ For a detailed discussion of the decoration of Seneb-Kay's burial chamber: Wegner 2017.

¹⁰ Texts in the burial chamber of CS9 only record the king's nomen and prenomen, we have no indications of other elements of his titulary. The king's nomen is here transcribed as Seneb-Kay due to the possibility that (the otherwise unparalleled name *Snbk3y*) may represent a filiative nomen composed of the names Seneb and Kay, meaning »Seneb's (son) Kay«. For discussion of this issue see Wegner 2017.

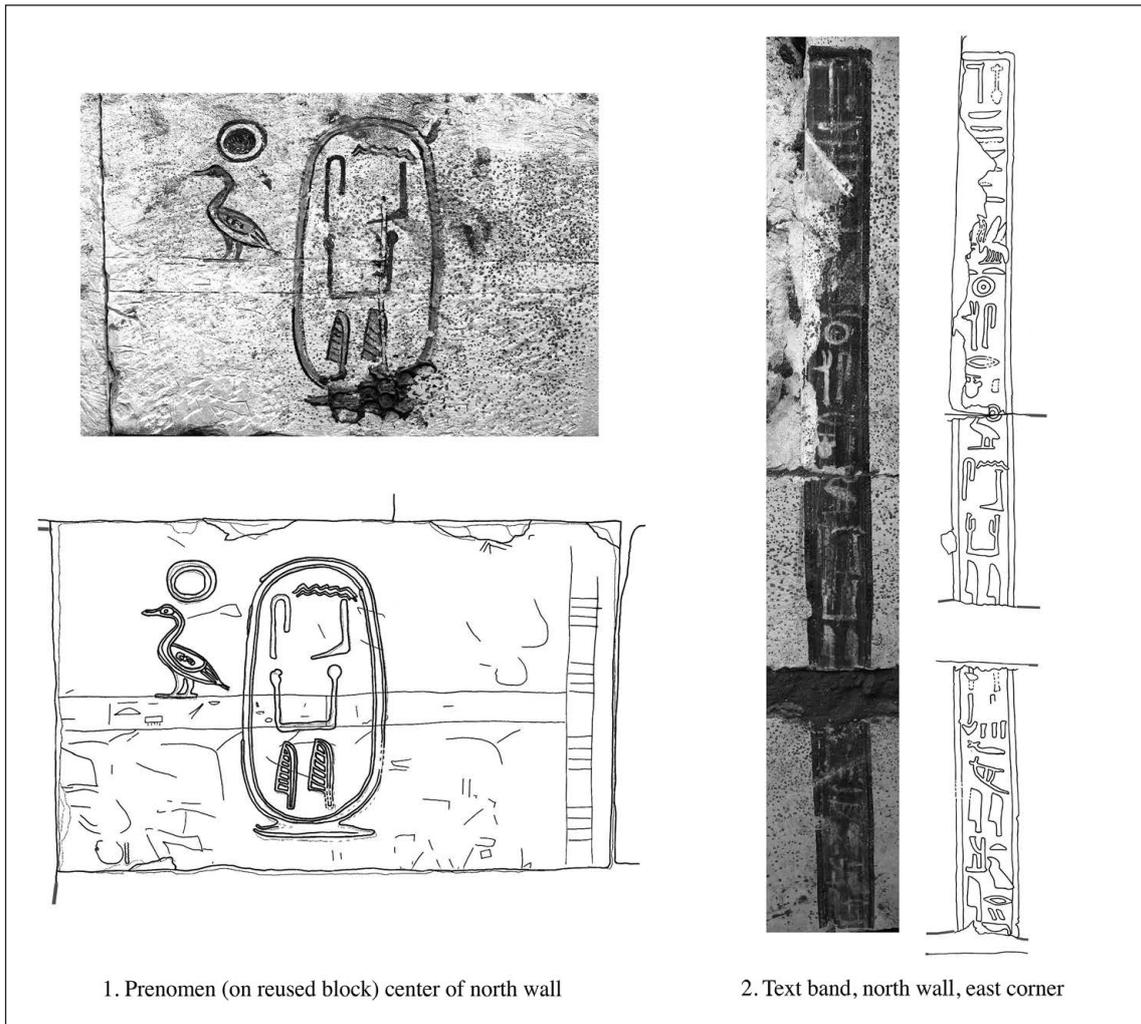


Fig. 3 Details from the burial chamber of Woseribre Seneb-Kay showing the king's *prenomen* (1), and one of the text bands containing the longer set of royal titles with *prenomen* and *nomen* (2)



Fig. 4 Apotropaion from Cemetery D, Abydos with inscription recording name of king (*Sb-k3y*), likely for Seneb-Kay. Cairo Museum CG 9433 (JE34988) (Photo courtesy of E. F. Vink)

be ascribed to Seneb-Kay (fig. 4). This artifact, also from Abydos, is an ebony apotropaion now in Cairo (CG 9433) excavated by Randall-MacIver in Cemetery D¹¹. The apotropaion is inscribed for a king identified as: *nṯr nṯr nb tꜣwy nb irt ḥt sꜣ R^c (Sbkꜣy) 'Ist nṯrt mry* – »The good god, lord of the Two-Lands, lord of ritual, son of Re, (Sebkay), beloved of the goddess Isis.« This otherwise unattested king *Sebkay* is almost certainly one and the same as Seneb-Kay now known from his tomb at South Abydos¹². Omission of the »n« consonant in the writing of the *nomen* is explicable by the limited space available and the possibility that the inscription is secondarily altered¹³.

Who is king Woseribre Seneb-Kay and when did he reign? What is this king's relationship with the anonymous owners of the other seven similarly-designed, but undecorated, Second Intermediate Period tombs at South Abydos? In the following discussion we will examine crucial points regarding the dating of Seneb-Kay suggesting his reign falls contemporary with the 16th Theban Dynasty¹⁴, likely overlapping with the early-middle Hyksos Period. Indeed, germane to the topic of the present volume, Woseribre Seneb-Kay may well have been a close contemporary of the Hyksos king Khyam. Particularly significant is the probable inclusion of Seneb-Kay's *prenomen*, Woseribre, in column 11 of the Turin King List, implications of which we shall discuss here. Several key points will be advanced suggesting that Seneb-Kay and the, as-yet anonymous, owners of the other associated Second Intermediate Period tombs at South Abydos comprise a short lived Upper Egyptian dynasty, perhaps verifying the essential arguments originally hypothesized by Kim Ryholt for the existence of a so-called Abydos-Dynasty¹⁵.

Iconographic dating evidence

Crucial indicators for the date of Seneb-Kay occur in the imagery and texts in the king's painted burial chamber. The decoration of Seneb-Kay's burial chamber represents a direct adaptation of the repertoire of imagery associated with coffin and canopic-chest decoration of the Late Middle Kingdom and Second Intermediate Period¹⁶. It is not absolutely clear why this decoration occurs in Seneb-Kay's tomb and not in other tombs of the Second Intermediate Period cemetery at South Abydos. However, it is highly probable that this same essential set of iconography would have been replicated on the painted coffins and canopic boxes within all of these burials. Consequently, wall decoration of this form may, to a certain extent, have been redundant in terms of the burial assemblage as a whole.

Elements adapted onto the burial chamber walls include the images of Isis and Nephthys with upraised arms which typically decorate the short ends of the coffin. In Seneb-Kay's tomb these two goddesses occur on the side walls of the burial chamber likely flanking the location once occupied

¹¹ Recovered from Cemetery D, tomb 78: Randall-MacIver – Mace 1902, 69. 87. 92. 96. 100 pl. 43; Daressy 1903, no. 9433; Altenmüller 1965a, 23–24. 61. 76–77 and Altenmüller 1965b, 36–37.

¹² Several scholars have placed *Sebkay* in the 13th Dynasty, see particularly Ryholt 1997, 219 and 340–341. Ryholt proposed the name is a filiative *nomen*, »Seb's son Kay«, and that king Kay was the father of Amenemhat VII. This reconstruction placing the king in the middle 13th Dynasty appears now improbable.

¹³ The text naming king *Sebkay* occurs in three juxtaposed columns but with the central column recessed and the hieroglyphs cut in raised relief. While this may have been intentional – highlighting the *nomen* of the king – it appears possible the text is recarved, either altering the text from an earlier name, or correcting an original carving of the central column. Either way, the lack of the »n« within the cartouche is explained by the lack of space.

¹⁴ Throughout this article I employ a differentiation between a Theban 16th Dynasty (coeval with the early-mid 15th Dynasty) and 17th Dynasty as defined by Ryholt 1997, rather than grouping all post-13th Dynasty Second Intermediate Period Theban rulers as 17th Dynasty, as preferred, for instance, by some authors such as G. Miniaci, C. Bennett and others. The 16th Dynasty appears likely, however, to have arisen prior to the end of the 13th Dynasty, see recently comments of Ilin-Tomich 2014.

¹⁵ Ryholt 1997, 163–166 and 264–265.

¹⁶ Thanks to Jennifer Houser Wegner for her work on the decoration and iconography of the Seneb-Kay burial chamber. For recent discussion of the texts and iconography see Wegner 2017.



Fig. 5 South wall of the burial chamber of Seneb-Kay showing the false door panel flanked by Neith (left) and Nut (right) (© J. Wegner)

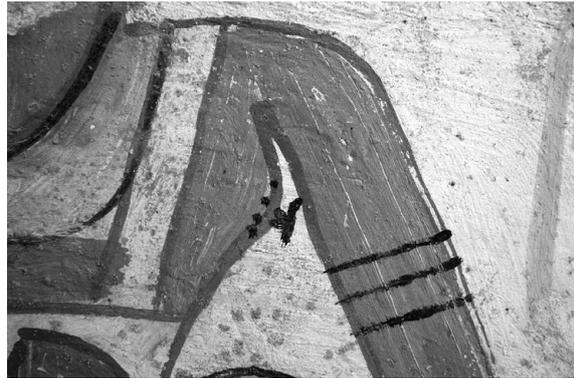


Fig. 6 Truncated hieroglyphs in the lower part of burial chamber text columns (left) and convention of T-shaped nipple on the human figures in the tomb of Seneb-Kay (right) (© J. Wegner)

Seneb-Kay's burial chamber (fig. 6 left). Two specific animal hieroglyphs display purposeful truncation: the legless *w*-quail chicks, and the *f*-vipers which have attenuated tails. Other animal signs are shown with full bodies including the *s3*-birds, as well as the *bity*/bee hieroglyphs, signs which in the fuller application of truncation would be shown headless. It is particularly interesting that the use of truncated hieroglyphs in Seneb-Kay's burial chamber is not as consistently applied as occurs on Theban Black-Type coffins suggesting a relatively later date for Seneb-Kay vis-à-vis that coffin group. Seneb-Kay himself was buried in a White-Type painted coffin, fragments of which survived among the despoiled remains of his burial.

The somewhat inconsistent application of the truncated hieroglyphs parallels examples from the latest phase of its development during the 16th and early 17th Dynasties¹⁹. Quite close parallels to the mode of truncation in Seneb-Kay's tomb may be noted in drawings of the (now lost) coffin of Queen Montuhotep, wife of king Sekhemresemantawy-Djehuty of the 16th Dynasty, as well as the painted canopic box originally inscribed for king Djehuty now in Berlin²⁰. The reign of Dje-

by the king's coffin¹⁷. Particularly significant is the simplified false door panel on the innermost wall of Seneb-Kay's burial chamber (fig. 5). This panel includes paired *udjat* eyes flanking a central basin and *shen* symbol. The composition of the panel closely parallels false doors seen in the Black-Type painted coffins that appear in Upper Egypt at the end of the 13th Dynasty continuing into the Second Intermediate Period. Several examples of these coffins also dispense with the more complex lower panel of the false door as may occur in Seneb-Kay's tomb¹⁸.

An important dating criterion is the occurrence of truncated hieroglyphs in the texts of

¹⁷ Seneb-Kay's burial included a white-type rectangular outer sarcophagus and evidently an anthropoid inner coffin. Fragmentary remains of a plastered and painted face mask were recovered. The canopic chest was composed of reused cedar but the painted decoration dating to Seneb-Kay had nearly entirely fallen away.

¹⁸ Among the Black-Type rectangular coffins see for instance the coffin of Netemesaf from Assasif (MMA 32.3.428). The simplified false door panel paralleling Seneb-Kay continues into Second Intermediate Period rishi coffins; see Tiradritti 2010, pl. 115. See Wegner 2017 for further discussion on Seneb-Kay's false door.

¹⁹ See the discussion of Miniaci 2010, 113–134.

²⁰ Dodson 1994, 117; Winlock 1924, 269–270 and pl. 15.

huty has been argued to fall in the early-middle part of the 16th Dynasty²¹. Examples of this varied application of truncation in funerary texts occurs as late as the Sobekemsaf and Antef kings of the middle 17th Dynasty and may be seen again in the canopic boxes of the Sekhemre-Wadjkhau Sobekemsaf II²², and Sekhemre-Wepmaat Antef²³. After this stage the tradition of truncated hieroglyphs vanishes. Consequently, the evidence suggests Seneb-Kay's decoration falls within this final phase of use of the truncated hieroglyphs during the 16th to earlier 17th Dynasty.

The most significant iconographic dating evidence in the decoration of Seneb-Kay's tomb occurs in the mode of treatment of the anatomy of the goddess figures (fig. 6 right). A notable detail is the artistic convention of a T-shaped nipple on the breasts of the goddesses. This very distinctive treatment occurs also in the tomb chapel of Sobeknakht II, the governor of El-Kab, where it occurs on both female and male figures as clearly visible in photographs published recently by Vivian W. Davies²⁴. Although we lack a fuller corpus of decorated tombs and tomb chapels for the Second Intermediate Period which might provide further evidence on the duration and geographical range of this detail, the co-occurrence of this rather idiosyncratic artistic element established a probable synchronism between the tomb of Seneb-Kay and Sobeknakht II of El-Kab (fig. 7).

The tomb of Sobeknakht II (El-Kab tomb 10) can be dated with a high level of probability within a time range defined by the data contained in the Karnak Juridical Stela and genealogical texts in the tomb itself. The transfer of the office of governor of El-Kab to Sobeknakht I, father of Sobeknakht II, occurred in year 1 of the 16th Dynasty king Sewadjenre Nebiriau I. The long reign attested for Nebiriau I (26 years in the Turin King List), suggests that Sobeknakht II's tenure as governor of El-Kab falls substantially within that same reign and the subsequent long reign of Sewoserenre-Bebiankh (12 year reign in the Turin King List)²⁵. In view of the substantial time-frame, 38 years, represented by the reigns of Nebiriau I and Bebiankh, Sobeknakht II's career, and the construction and decoration of his tomb appears likely to have fallen within these two reigns forming the middle part of the 16th Dynasty²⁶.

Interestingly, the tomb of Sobeknakht II was decorated by a particular artist, Sedjemnetjeru, representations of whom appears both in Sobeknakht's tomb at El-Kab, as well as in another tomb decorated by Sedjemnetjeru: that of Horemkhauef at Hierakonpolis. The career of Horemkhauef is well documented through his stela in the Metropolitan Museum (MMA 35.7.55) recording his visit, possibly early in his career, to Itj-tawy during the waning years of the 13th Dynasty²⁷. The convention of the T-shaped nipple also appears, albeit less consistently applied, in the tomb chapel of Horemkhauef²⁸, which appears to have been completed and decorated posthumously²⁹. The use of this rather distinctive anatomical treatment in the funerary monuments of Seneb-Kay, Sobeknakht II and Horemkhauef establishes a close chronological proximity among the three structures.

Other aspects of the decoration of Seneb-Kay's tomb display particular similarities with both Sobeknakht II and Horemkhauef. The lack of use of grid lines, as noted by Davies, occurs also in Seneb-Kay where black lines were used to frame the main scene elements. The figures themselves were drawn free-hand. Another distinctive artistic element is the use of a red outline for the goddesses in Seneb-Kay's tomb but a black outline for the other scene elements. The same conven-

²¹ Ryholt 1997, 151–152.

²² Box Leiden AH.216 attributed to Sekhemre-Wadjkhau Sobekemsaf (II): images in Miniaci 2006, 75–87.

²³ Miniaci 2011, fig. 66 pl. 8 b.

²⁴ The original publication of the tomb chapel of Sobeknakht, Tylor 1896, does not indicate this artistic detail. However, it is clearly visible in more recent published photographs: Davies 2003, 19; and Davies 2010, pl. 46.

²⁵ The two intervening reigns of Nebiriau II and Semenre are of unknown duration.

²⁶ See discussion of Davies 2010, 224–225. 229–231.

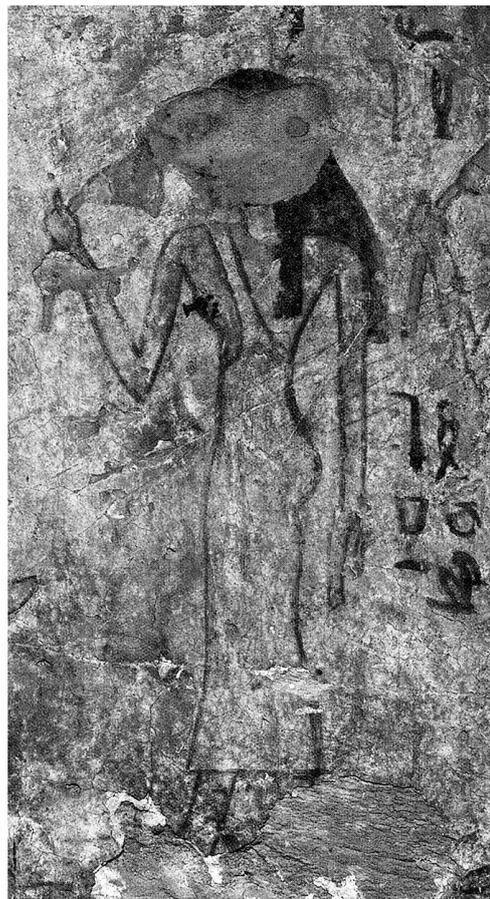
²⁷ Hayes 1947, 3–11 and full set of references: Davies 2001, 113.

²⁸ Wreszinski 1927, pl. 42. The larger figure of the tomb owner in the image shown here has the T-shaped nipple, other smaller figures appear to be lacking this detail.

²⁹ Vandersleyen 1971, 208; Davies 2001, 120.



1. Tomb of Seneb-Kay (© J. Wegner)



2. Tomb chapel of Sobeknakht II (after Davies 2010, pl. 46)



3. Tomb chapel of Sobeknakht II (after Davies 2003, 19)



4. Tomb chapel of Horemkhauef (after Wreszinski 1927, pl. 42)

Fig. 7 Occurrence of T-shaped nipples on human figures in tomb of Seneb-Kay, Sobeknakht II at El-Kab, and Horemkhauef at Hierakonpolis

tion occurs for the female figures in the chapels of Sobeknakht and Horemkhauef³⁰. Overall, the set of artistic similarities establishes close contemporaneity of the three tombs, a synchronism that fits also with the evidence of the truncated hieroglyphs and parallels to the iconographic repertoire.

It appears remotely conceivable that Seneb-Kay's tomb might have been decorated by the same artist, Sedjemnetjeru, as those at El-Kab and Hierakonpolis. Regardless of the identity of the artist, however, the decoration in Seneb-Kay's tomb belongs to the same timeframe as Sobeknakht II and Horemkhauef. On this basis, the reign of Woseribre Seneb-Kay appears to fall squarely contemporary with the Theban 16th Dynasty. More specifically, the iconography of the decorated tomb chamber and close parallels at El-Kab-Hierakonpolis suggest the tomb dates to the middle 16th Dynasty, quite possibly overlapping or contemporary the era of Theban kings Nebiriau I, Nebiriau II, Semenre, and Bebiankh whose reigns span a considerable period of some four decades during the middle 16th Dynasty.

Evidence for the position of Woseribre Seneb-Kay in the Turin Canon of Kings

Apart from the artistic synchronisms discussed above, there is an additional crucial piece of evidence regarding the historical position of Seneb-Kay: the probable occurrence of this king's pre-nomen in the Turin King List. Indeed, the King List furnishes key data relevant to placing Seneb-Kay, and the anonymous owners of the other seven tombs at South Abydos, within the historical framework of the Second Intermediate Period.

Among the numerous issues that have long frustrated the use of the Second Intermediate Period entries in the Turin King List is the exceedingly fragmentary condition of the second half of column 11. Column 11 includes 14 lines recording entries for kings of the 16th Dynasty as well as a summation (in line 15) for the total of that dynasty. Line 16 of column 11 initiates a new sequence of names which then breaks away after only two entries³¹. After a lacuna the text continues with six entries preserved on a smaller fragment that forms the bottom of column 11³². Placement of the fragments based on papyrus fibers suggests the column as a whole originally contained 31 lines leaving a probable 8 names missing. This represents a group of 16 names that follow the summation for the 16th Dynasty. It is further clear that this list of 16 names must have continued onto a now-missing column 12 since there is no final summation line at the bottom of column 11.

Five of the eight entries in this section preserve partial *prenomina* and regnal lengths. The first two kings have *prenomina* of similar format, both reading: *Wsr-///-r^c*. Whereas the first two entries preserve the beginning of the *prenomina*, the final entries (Fragment 163) preserve only the second part of the names. One has the element (...*hb-r^c*) and two incorporate the construction (...*wbn-r^c*). Individual regnal lengths are preserved for the last five kings in column 11, adding to 14–16 years.

Interpretation has varied considerably on the nature of these entries. Noting that there are a significant number of additional 16th Dynasty kings attested in the monumental record, James Allen has proposed that these kings as well as the succeeding 17th Dynasty kings were all grouped together in this section of the papyrus which the compiler intended as a direct continuation of the 16th Dynasty³³. Kim Ryholt, building on comments by Detlef Franke has advanced the hypothesis that these otherwise unattested kings in column 11/16–31 may rather belong to a separate ›un-numbered‹ dynasty, an ›Abydos Dynasty‹³⁴.

³⁰ For a discussion of these aspects in the tombs of Sobeknakht II and Horemkhauef: Davies 2001, 119–121.

³¹ Fragment 142.

³² Fragment 163.

³³ Allen 2010, 1–10.

³⁴ Ryholt 1997, 163–166. 264–265. 392.

Part of the reasoning for suggesting the existence of an independent ›Abydos Dynasty‹ is the occurrence of monuments of three otherwise unattested Second Intermediate Period kings on monuments found exclusively at Abydos: Wepwawetemsaf, Paentjeny, and Senaib³⁵. The fact that these kings are not attested elsewhere, and two possess names suggesting direct Abydene and Thinite associations led Ryholt to propose the existence of a short-lived Abydene Dynasty that arose contemporary with the final decline of the 13th Dynasty, and the beginning of both the Hyksos 15th and Theban 16th Dynasties³⁶.

Whether or not these particular three kings relate to an independent ›Abydos Dynasty‹, a rather significant problem for Allen's suggestion is the fact that, despite the fragmentary state of the five partial *prenomina* in column 11 of the Turin King List, it is clear that none correspond to either the ten missing 16th Dynasty kings names, nor to any of the ten 17th Dynasty kings whose names, and possible regnal order, are established through archaeological sources³⁷.

Many of these kings, including five of the first six 17th Dynasty kings, employed the prenominal formula *Shm-R^c-X*. Not only do the five partial entries in column 11 lack this distinctive structure so prominent in the Theban succession, but the names are demonstrably different than those held by any of the known 16th–17th Dynasty Theban rulers. Consequently, they must represent: (1) yet additional kings associated with the – already crowded – Theban 16th–17th Dynasty sequence; or (2) Second Intermediate Period kings who, as Kim Ryholt, suggested, form contemporaneous rulers independent of the Theban succession.

For the first time, with the discovery of the tomb of Woseribre Seneb-Kay, we now have a Second Intermediate Period king whose *premen* corresponds with entries in this problematical section of the Turin King List (fig. 8). The format of the first two kings in this section is clearly written: *Wsr///r^c*. This raises the significant possibility that one of the two royal names in column 11 lines 16–17 is *Wsr[ib]r^c-[Snbkzy]*³⁸.

It is furthermore notable that there are two *prenomina* in immediate succession employing this same formula *Wsr-X-r^c*. It remains unknown whether use of the *Wsr-X-r^c* pattern extended beyond the first two kings of this group in lines 16–17. If so, Seneb-Kay could occupy a later position in this grouping. Even if that is the case, however, we have indications in the Turin King List of a distinct succession of associated rulers using a specific prenominal structure. Woseribre Seneb-Kay is likely to be one member of this group, if not specifically one of the two kings listed at the beginning of this new sequence. This association between an archaeologically attested Second Intermediate Period king and formerly unexplained *prenomina* in the Turin King List is itself testimony to the relevance of that document in the reconstruction of the Second Intermediate Period political history³⁹.

In light of the possible occurrence of Woseribre Seneb-Kay in the Turin King List line 11/16 or line 11/17 a crucial question that now emerges is: what is the nature of the change between the group of kings preceding line 11/15 and the new series initiated in line 11/16? The fact that the compiler recognized some meaningful change is indicated by the use of a summation line in line 11/15. Although the dynastic total is not preserved, this entry should list the sum for the preceding 14 kings⁴⁰. Several scholars have assumed that the list then simply continues on with further

³⁵ The stelae of kings Sekhemreneferkhau-Wepwawetemsaf, Sekhemrekhutawy-Paentjeny, and Menkhaure-Senaib.

³⁶ The evidence for the existence of an ›Abydos Dynasty‹ has been doubted by several scholars prior to 2014, the most significant discussion being Marée's criticism of the evidence for identification of Wepwawetemsaf and Paentjeny as Abydene rulers: Marée 2010, 275–277.

³⁷ Regarding the sequence of the 17th Dynasty: Polz 2007, 20–59 and Polz 2010, 343–353.

³⁸ Although presumably the writing of the king's *nomen* would not have occurred in the Turin King List due to the fact that entries in the Second Intermediate Period section tend to use the *premen* alone. The *nomen* only occurs in rare instances (such as with kings Nebiriau I–II) without the *premen*.

³⁹ Regarding the relevance of the Turin King List see observations Allen 2010, 5.

⁴⁰ Several scholars have noted that the number of kings »5« does not match the total number of kings in Turin King List lines 10/31–11/14 (15 kings), but a scribal error with an omission of the sign for »ten« seems to be quite probable in this instance.

Fragment	Line	Name	Identification	Regnal Length
f 125 f 126 f 127 f 128 f 129 f 130 f 131 f 132 f 133 f 134 f 135	10/31	name and regnal length lost		
	11/1	Sekhemre-[sementawy]	[Djehuty]	3 years
	11/2	Sekhemre-[sewosertwy]	Sobekhotep (VIII)	6 years
	11/3	Sekhemre-s[ankhtwy]	Neferhotep (III)	1 year
	11/4	Sankhre	Montuhotepi	1 year
	11/5	Sewadjenre	Nebiriau (I)	26 years
	11/6	---	Nebiriau (II)	--
	11/7	Semenre	---	--
	11/8	Sewoserenre	Bebiankh	12 years
	11/9	Sekhemre-shedwaset	---	--
f 142	11/10	name/ regnal length lost		
	11/11	"		
	11/12	"		
	11/13	"		
	11/14	"		
	11/15	summation line		
	11/16	Woser //re	?	
11/17	Woser//re	?		
f 163	11/18-11/25	(names of 8 kings lost)		
	11/26	//hebre	---	2 years
	11/27	name lost	---	2 years
	11/28	name lost	---	2 years
	11/29	name lost	---	4 years
11/30	//webenre	---	3-4 years	
11/31	//webenre	---	3-4 years	

Unplaced Kings Attributable to 16th Dynasty	
Djedhotepre	Dedumose (I)
Djedneferre	Dedumose (II)
Djedankhre	Montuemsaf
Merankhre	Montuhotep (VI)
Senefribre	Senwosret (IV)

Woseribre-Senebkay (tomb at South Abydos)	
7 anonymous kings tombs probably post-Senebkay at South Abydos	

Fig. 8 Column 11 of the Turin King List with suggested correspondence of Woseribre Seneb-Kay with *prenomina* in positions 11/16 and 11/17 (diagram adapted J. Wegner with line drawing after Gardiner 1959, column XI)

names of the Theban 16th and 17th Dynasties. Allen in particular has stated there appears to be no distinction between the two and even that »these 17 rulers can easily be accommodated within the lost or partially preserved entries for the two dynasties ...«⁴¹.

As we have already observed, however, Allen's interpretation seems problematic given that the partially preserved *prenomina*, particularly those of the first two kings in the new series, *Wsr-X-r*^c, equate with no known 17th Dynasty kings. It is plausible the summation and change to a new series signals the beginning of a new dynastic line. However, the chronicler would necessarily have recorded contemporaneous dynasties in a similar fashion, moving from one dynastic grouping and its summation to a new series. Without a preserved heading there is no way to conclude so confidently whether this new regnal sequence might be sequential or contemporaneous.

Chronological parameters

Could Woseribre Seneb-Kay, and the group of five partially preserved names included in Turin King List column 11 represent yet more kings who should be added into the Theban royal succession of the late Second Intermediate Period? Could Seneb-Kay and the owners of the seven other

⁴¹ Allen 2010, 1–10.

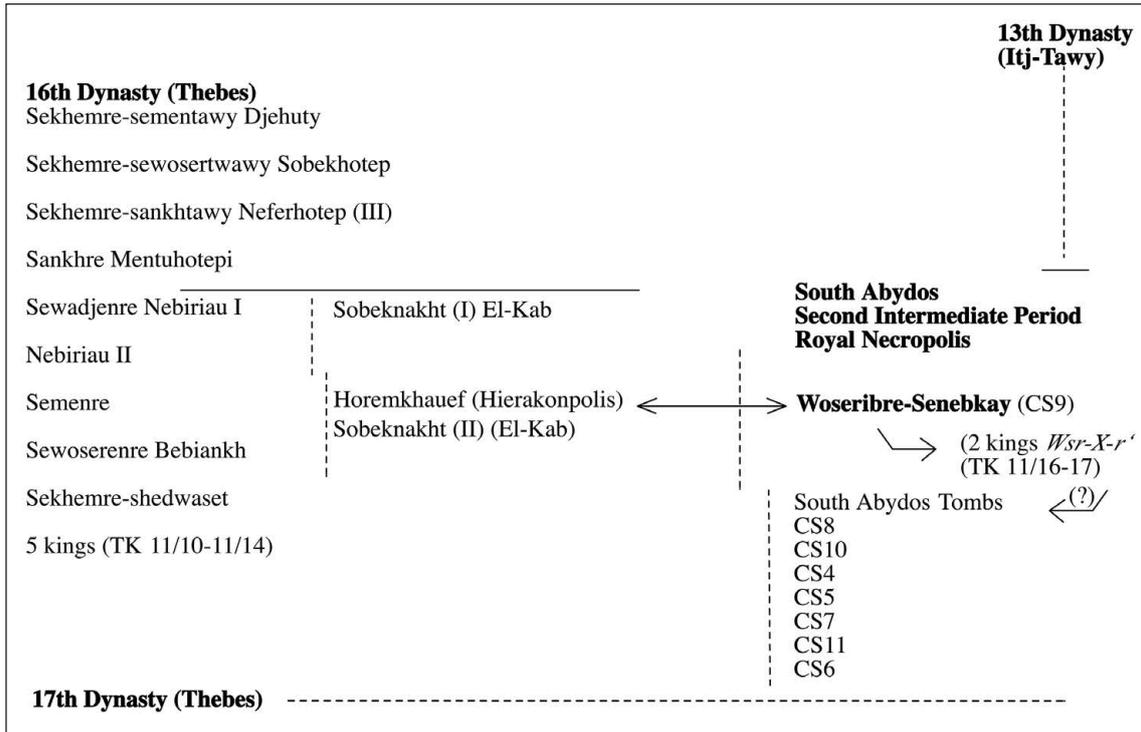


Fig. 9 Table showing the suggested chronological synchronism of the tomb of Seneb-Kay with the middle 16th Dynasty (© J. Wegner)

Second Intermediate Period tombs at South Abydos represent a subset of these Theban rulers who chose to be buried at Abydos?

These questions regarding the identity of Seneb-Kay and the associated tombs at South Abydos have significant implications for the political structure and dynastic organization of Upper Egypt during the first half of the Hyksos Period. Examination of the chronological constraints on the Second Intermediate chronology helps to illuminate the two possibilities of:

- (1) a single Theban royal succession ruling all of Upper Egypt from the period of decline of the 13th Dynasty through the Hyksos era and up to the reign of Nebpehtyre-Ahmoese.
- (2) a more fragmentary pattern of rulership that may have seen other areas of Upper Egypt – even if only briefly – ruled independently of Thebes.

A number of authors have argued strenuously in favor of a single Theban line, alternatively termed the »17th Dynasty«, or the »16th and 17th Dynasties« in sequence, ruling Upper Egypt contemporary with or subsequent to the decline of the 13th Dynasty. However, there are serious chronological problems that confront the viability of such a unilinear model. Genealogical and chronological data, as discussed by Chris Bennett establishes a temporal framework for the regnal and dynastic sequence of the late Second Intermediate Period in Upper Egypt⁴². These data can be instructively compared with the numbers of attested rulers and data regarding regnal lengths.

Chris Bennett’s analysis of the historical evidence provided by the Juridical Stela and El-Kab inscriptions has examined the issue of the number of generations that elapsed between the final reigns of the 13th Dynasty and the beginning of the New Kingdom. The probable generational distance between several key reigns – particularly Merhotepre of the 13th Dynasty and Nebiriau I of the 16th Dynasty – and the beginning of the 18th Dynasty provides the basis for a generational chronometer in which to situate the regnal history of Upper Egypt during the Second Intermediate Period. Most relevant to the present discussion, Bennett has estimated the passage of six generations from year 1 of Nebiriau I to the death of Renni of El-Kab during the reign of Amen-

⁴² Bennett 2002, 123–155 and Bennett 2006, 231–243.

hotep I. Although there is considerable leeway for conversion of generations to absolute years⁴³, Bennett has defined this framework also in terms of the way the timeframe impinges on the late Middle Kingdom and early 18th Dynasty. He has estimated a period of 105 years between year 1 of Nebiriau I and the accession of Ahmose.

Without delving into the details of the genealogical discussion, let us adopt that figure as a reference point for considering the issues defined above: a unilinear pattern of Theban succession, versus a more fragmentary political structure. Within this estimated 105 years we must accommodate the known regnal lengths for 16th Dynasty kings totaling 38 years (Nebiriau I and Bebi-ankh), and 17th Dynasty of 14 years (Sobekemsaf I, Seqenenre Tao and Kamose)⁴⁴. Additionally, we have the fragmentary reign lengths for the column 11 kings totaling 14–16 years. A relatively small group of just ten kings thus account for 66 years leaving 39 years remaining for all other rulers attested in the Turin King List and through the archaeological record.

The numerically uncounted group is sizeable including seven additional names for the 16th Dynasty entries in the Turin King List⁴⁵, as well as 11 names in the second half of column 11 that do not have preserved regnal lengths. Additionally we have five Theban kings attested archaeologically who can be attributed to the 16th Dynasty⁴⁶, as well as the three kings attested on stelae at Abydos whom Ryholt has argued belong to the Abydos Dynasty⁴⁷. There are six additional 17th Dynasty kings for whom regnal lengths are not known⁴⁸. To these kings we must now add Woseribre Seneb-Kay and the seven anonymous tombs in the Second Intermediate Period necropolis at South Abydos.

If we assume that the archaeologically attested 16th Dynasty kings, the three kings attested through stelae at Abydos, as well as the tombs of Seneb-Kay and the seven others at South Abydos are all kings included in the damaged sections of Turin King List column 11, we still achieve a daunting minimum of 25 kings whose reigns must be accommodated in this estimated 39 years based on Bennett's generational calculations. This necessitates an average reign length of 1.5 years for these 25 kings.

The probability of these kings consistently having such short reigns appears extremely low. Within this group we have reigns of a number of significant 17th Dynasty rulers such as Senakhtenre-Ahmose, and the three Antef kings, estimates for whose reigns are substantially longer than this low average. Particularly problematic is the fact that with the robust number of names before the 17th Dynasty the time available for the nine Theban 17th Dynasty rulers leading up to accession of Nebpehtyre-Ahmose shrinks to a paltry two decades.

There appear to be potential adjustments that might ameliorate this chronological problem. One (unattractive) possibility would be to entirely discount the longer regnal lengths for Nebiriau I (26 years) and Bebi-ankh (12 years) cited by the Turin King List in order to accommodate a longer average for the remaining kings. Hypothetically, if these two kings were reduced to unknown reign lengths within the estimated 105 year timeframe from year 1 of Nebiriau to year 1 of Nebpehtyre-Ahmose we would still require a below 3-year average regnal length for the 25 unaccounted kings as well as Nebiriau I and Bebi-ankh⁴⁹.

A second possibility would be to discount the relevance of the El-Kab genealogical evidence in order to lengthen the timeframe from Nebiriau I to Nebpehtyre-Ahmose. Certainly, the gen-

⁴³ He applied the figure of 25 years per generation but discussed evidence favoring a longer year average per generation: Bennett 2006, 240.

⁴⁴ Here again, we are following the division between a Theban 16th and 17th Dynasty as defined by Ryholt, rather than a single 17th Dynasty referring to this entire period as employed by Bennett and others.

⁴⁵ Nebiriau II, Semenre and the unnamed kings in the broken sections of TK 11/10–14

⁴⁶ Djedhotepre Dedumose I, Djedneferre Dedumose II, Djedankhre Mentuemsaf, Merankhre Montuhotep VI, and Seneferibre Senwosret IV.

⁴⁷ Sekhemrenerferkhau-Wepwawetemsaf, Sekhemrekhutawy-Paentjenty, and Menkhaure-Senaab.

⁴⁸ Sekhemre-wahkhau Rahotep, Sekhemre-shedtawy Sobekemsaf (II), Sekhemre-wepmaat Antef, Nubkheperre Antef, Sekhemre-heruhermaat Antef, and Senakhtenre-Ahmose.

⁴⁹ i.e. there would be then 77 years available for 27 kings making an average regnal length of 2.85 years.

erational sequence that Bennett has reconstructed based on the El-Kab genealogical data may be adjusted somewhat in terms of its translation into absolute years. However, as Bennett observed, lengthening this timeframe then impinges considerably on the chronology of the late Middle Kingdom. It appears probable that with a 105 year timeframe between Nebiriau I and Ahmose there must already be a substantial overlap between the end of the 13th Dynasty and the emergent 16th or »early 17th Dynasty« as Bennett has termed it. Bennett argued on this basis for a substantial overlap of the »early 17th Dynasty« with the final (post-Merneferre Ay) 13th Dynasty kings. Can we envision pushing the advent of the independent Theban 16th Dynasty yet further back in time so as to overlap with pre-Merneferre-Ay 13th Dynasty kings?

In the view of the present author there does not appear to be sufficient leeway in the chronological parameters to reasonably accommodate so many Upper Egyptian Second Intermediate Period kings in a purely unilinear Theban succession. A greater probability appears to be a phase of territorial fragmentation into multiple kingdoms that may have attended the final stages in the decline of 13th Dynasty power in Upper Egypt and its immediate aftermath. This model appears to be consistent with the fact that we now have a royal necropolis at South Abydos that includes Seneb-Kay as well as at least seven additional kings who appear to have been his successors.

Seneb-Kay and the sequence of tombs at South Abydos

If Woseribre Seneb-Kay is one of the two kings in lines 11/16–17 of the Turin King List it is particularly interesting that his name would fall near the beginning of this sequence of entries. The King List may, in that case, imply a relatively early date for Seneb-Kay within this dynastic grouping. Interestingly, the hint of an early position for Seneb-Kay corresponds with aspects of the archaeological evidence from the Second Intermediate Period necropolis at South Abydos. As noted above, the eight tombs excavated so far represent a comparatively cohesive grouping – suggesting all develop in sequence over a relatively short time frame. Within the tomb group there are indications of a general south to north pattern of cemetery growth. Let us return to briefly consider the context of Seneb-Kay's tomb within the Second Intermediate Period necropolis at South Abydos.

Seneb-Kay's tomb was positioned in the courtyard area in front of the tomb of king Sobekhotep N (S10). His tomb made use of cedar coffin boards deriving originally from the burial of a king Sobekhotep, presumably the owner of the adjacent tomb S10⁵⁰. At the far north-eastern end of the Second Intermediate Period group we have the phenomenon of further reuse of materials from tomb S10, in this case not portable elements of the burial equipment, but reuse of the quartzite burial chamber that was extracted from the substructure of tomb S10. The implication appears to be a progression from reuse of earlier 13th Dynasty burial equipment through a final deconstruction of the actual architecture of the tomb of Sobekhotep N by the owner of tomb CS6. Consequently, Seneb-Kay appears in all likelihood to be the earliest of the eight known tombs while CS6 is later. There is potential for other Second Intermediate Period tombs located adjacent to tomb S10, but Seneb-Kay appears to be the earliest within the currently known group.

While we lack evidence for identity of the owners of the seven undecorated tombs north of Seneb-Kay there are strong indications that these are all royal tombs that once contained burials of kings on a par with the status of Seneb-Kay. Several of the tombs are of equivalent scale and design to that of Seneb-Kay while two represent a more substantial investment in construction. Even the relatively small structure of CS6 – one of the smallest in the cemetery – reflects the exercise of considerable authority and resources in the mode of reuse of the ca. 60-ton quartzite chamber taken from within S10.

⁵⁰ For a detailed discussion of the canopic chest and the original texts of king Sobekhotep N: Wegner – Cahail 2015.

Moreover, despite being severely plundered, four of the eight tombs excavated in 2013–2014 have yielded the remains exclusively of the single interments of mature males. These include Seneb-Kay (CS9), as well as tombs CS5, 10 and 11. One of the tombs that did not yield human remains in 2013 (CS4) had been previously entered by Arthur Weigall in 1902 who reported recovering a set of bones from a male burial⁵¹. This pattern of male interments in tombs closely resembling that of Seneb-Kay suggests this tomb cluster is associated with a specific sequence of associated kings. The eight tombs therefore appear likely to represent a royal necropolis that includes all, or a significant portion of, a specific Second Intermediate Period dynastic grouping.

Yet, despite the indications of royal status, the material culture of this Second Intermediate Period cemetery suggests these were rulers that were severely circumscribed in terms of access to raw materials as well as facing significant economic challenges. The nature of the site strongly suggests the tombs' identification as a group of regional Upper Egyptian kings making use of local resources in the construction of their tombs at Abydos.

The two entries *Wsr-X-r^c* and following fourteen entries in Turin King List column 11 represent twice the number of individuals currently known at South Abydos. However eight royal tombs forms a substantial subset of the sixteen names that succeed the 16th Dynasty in column 11 of the Turin King List. Additional tombs may be located further afield from the group currently known. Extensive unexamined terrain extends northwards from the main tomb cluster while deep debris mounds around the perimeter of tomb S10 could conceal further tombs which, like Seneb-Kay, were placed close to the preexisting 13th Dynasty tomb.

As we have defined above, Woseribre Seneb-Kay can be dated based on the iconographic elements within the 16th Dynasty, most probably in the timeframe from Nebiriau I to Bebiankh. Should Seneb-Kay, along with the seven other anonymous tombs now be squeezed into the 16th Dynasty Theban succession⁵²? Chronological considerations suggest not; the likelihood appears greater that South Abydos represents the burial ground of an independent line of Upper Egyptian kings whose period of rulership is approximately coterminous with the 16th Theban Dynasty. Geographically the evolving scope of their kingdom remains obscure as is the issue of their administrative center. However, the term ›Abydos Dynasty‹, as Ryholt proposed remains relevant, at least as regards the location of the tombs of Seneb-Kay and his successors. The still ongoing excavations in the Second Intermediate Period necropolis at South Abydos may yield further evidence on these issues.

Thoughts on the *prenomina* of Seneb-Kay and contemporary Second Intermediate Period kings

Identification of king Woseribre Seneb-Kay, and his approximate historical context, raises one final issue germane to this volume devoted to the age of the Hyksos Khyan. Here I would like to close with some final speculations regarding this king's coronation name and possible echoes among contemporary Egyptian kings of the Hyksos era. The format of Egyptian *prenomina* periodically offers insight into political and religious themes during certain historical eras⁵³. While *prenomina* form a fluctuating choice governed by numerous factors, we do witness discernible eras where *prenomina* follow specific formulaic patterns among kings ruling in succession, or in close contemporaneity. Occasionally prenominal variants focusing on the same themes and using the same core terminology occur. During the Second Intermediate Period this is witnessed well in the sequential *prenomina* Djedhotepre, Djedneferre and Djedankhre (Dedumose I, Dedumose II and Montuemsaf respectively).

⁵¹ Ayrton et al. 1904, 16.

⁵² See recently observations of Ilin-Tomich 2014, 146.

⁵³ Leprohon 2013.

During the Hyksos Period we see indications for a probable interplay between *prenomina* selected by the Hyksos kings and those of some of the contemporary Theban rulers. The pre-nomen Aaqenere of Apophis is so similarly structured to the *prenomen* of the 17th Dynasty king Seqenenre-Tao, that use of the name seems to mimic, or perhaps was meant to overtly supersede, the Theban king's throne name⁵⁴. Earlier in the Hyksos era, an interesting case of parallelism in *prenomina* occurs between the 16th Dynasty Theban king Sewoserrenre Bebiankh, and the Hyksos Khyan who also employs the same exact *prenomen*: Sewoserrenre.

Based on the evidence of the Turin King List we can suggest that Woseribre Seneb-Kay is one of at least two associated kings who use the prenominal formula *Wsr-X-r^c* in their titulary. Somewhat intriguing then is the likely close contemporaneity between Woseribre Seneb-Kay and Sewoserrenre-Bebiankh based on iconographic evidence examined above. While the *prenomen* of Bebiankh has the causative prefix, »s«, the co-occurrence of the »Woser/*wsr*« element is intriguing. The use of this particular word hardly necessitates contemporaneity between these two kings, it is a term that periodically appears in *prenomina* from the time of the Old Kingdom onwards. Yet, it appears worthwhile to at least make a passing observation on this issue. The *prenomen* *Wsibr^c* of king Seneb-Kay could be not a random choice for the titulary, but could reflect a phase of popularity for integrating the *wsr* element into the *prenomen* during the middle Hyksos Period⁵⁵. This, and other lines of evidence, suggest that king Woseribre Seneb-Kay may indeed have been an Upper Egyptian king who was a close contemporary of Sewoserrenre-Bebiankh of Thebes and the Hyksos ruler Sewoserrenre-Khyan.

Conclusions

Archaeological work at South Abydos has identified the tomb of Woseribre Seneb-Kay as one of a group of at least eight Second Intermediate Period kings who used the preexisting Middle Kingdom necropolis of Anubis-Mountain as their burial ground. While it might be tempting to view these kings as 16th Dynasty Theban rulers who chose Abydos for symbolic purposes, the nature of the archaeology of these tombs indicates a series of regional kings who constitute a regional dynasty that was broadly contemporary with the Theban 16th Dynasty. Based on artistic and iconographic elements in its decorated burial chamber, the tomb of Woseribre Seneb-Kay can be dated contemporary with the early-middle 16th Dynasty. Particularly significant are distinctive artistic parallels with the tombs of Sobeknakht II at El-Kab and Horemkhauef at Hierakonpolis, implying that Seneb-Kay dates contemporary with the middle 16th Dynasty Theban kings Nebiriau I to Sewoserrenre-Bebiankh (fig. 9). Seneb-Kay appears to be the earliest example in the group of eight currently known Second Intermediate Period tombs at South Abydos.

The occurrence of two *prenomina* following the same format as that of Seneb-Kay (*Wsr-X-r^c*), in the Turin King List (TK 11/16–17) suggests that the name of Seneb-Kay is likely to have been included in the Turin King List as part of a royal grouping that graphically follows the listing of the kings of the 16th Dynasty. Rather than representing a purely sequential ordering of Theban rulers of the 16th–17th Dynasties, columns 10–11 and (the missing column 12) the King List may in fact include a more complex structure that reflects a fragmentary political situation in Upper Egypt that accompanied the decline and end of 13th Dynasty royal power. Considerations of the probable chronological window between the beginning of the 16th Dynasty and the beginning of the reign of Nebpehtyre-Ahmosé makes it increasingly difficult to account for the large number of Upper Egyptian kings now attested through the Turin King List, inscriptional sources, and archaeological remains.

⁵⁴ On the changes in the *prenomina* of king Apophis (from Awoserre to Aaqenere to Nebkhepshre), see Ryholt 1997, 120–125.

⁵⁵ The *wsr* element reappears as well, however, in the final *prenomen* adopted by Apophis: Aawoserre.

Woseribre Seneb-Kay and the other anonymous kings buried at South Abydos appear in all likelihood to represent a regional kingdom that may have arisen contemporaneously with the Theban 16th Dynasty to the south and during the final stages of decay of Middle Kingdom state control from Itj-Tawy. While use of the term ›Abydos Dynasty‹ proposed by Kim Ryholt in 1997 has been challenged by some scholars, the tomb of Seneb-Kay and his successors provides archaeological evidence favoring the basic veracity of the existence of the ›Abydos Dynasty‹ during the Second Intermediate Period.

This probable date of Seneb-Kay also puts his reign coeval with the early and middle Hyksos Period. Seneb-Kay and his dynasty were close contemporaries to the ›age of Khyam‹. In 2015 analysis of the skeletal remains of Seneb-Kay showed that he died violently in battle with extensive trauma deriving from a fatal armed encounter⁵⁶. This evidence for the political conflict during the era in which Seneb-Kay lived helps to further emphasize the extent of political and economic fragmentation that accompanied the end of 13th Dynasty control and its aftermath in the south.

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⁵⁶ Detailed publication of Seneb-Kay and the other skeletal remains of the Second Intermediate Period kings at South Abydos are in preparation. Regarding the evidence provided by the skeletal remains of the king, see Wegner 2015, 76–77; and Hill et al. (forthcoming).

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