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The 'Lost Tombs' of Naqada: 735 Assemblages Reconstructed from Petrie's Archival Material and a New Look at a Long-known Cemetery Site

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Annex

The ‘lost tombs’ of Naqada 735 assemblages reconstructed from Petrie’s archival material and a new look at a long-known cemetery site

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ABSTRACT

The site of the ‘Main Cemetery’ of Naqada, north of Luxor, has yielded significant material remains that provide insights into this culture, which played a vital role in the early development of Egyptian civilization in the fourth millennium BCE. Unfortunately, of the 1918 tombs listed by W.M.F. Petrie during his excavation of the site, only 138 were described in the 1896 publication. This article aims to reinvestigate 735 tombs from this cemetery, which most were thought to be empty or for which most data was lost (not represented in the field notebooks preserved in the Petrie Museum, London), through extensive work on Petrie’s archival material, original publication, recently rediscovered pottery lists, and artifacts known in museums. This first sample is published here as an interim result of the project and will be made available in an online database. The reassessment revealed that the studied assemblages contain many additional artifacts, they could now be dated or their previous dating revised, and the corrected assemblages even give us a chance to highlight some mistakes in the seriation models built on previous ceramic inventories. These preliminary results testify once more to the importance of reexamining seemingly well-known sites in the light of old excavation data.

Keywords: Predynastic, Naqada, legacy data, ceramics, funerary archaeology.

RÉSUMÉ

Le site du ‘Main Cemetery’ de Naqada, situé au nord de Louqsor, a livré des restes matériels essentiels à la compréhension de la culture éponyme, qui a joué un rôle décisif dans les premières phases du développement de la civilisation égyptienne au cours du IV^e millénaire.

Malheureusement, parmi les 1918 tombes listées par W.M.F. Petrie lors de ses fouilles, seules 138 des 1918 tombes listées par Petrie lors de ses fouilles ont fait l'objet d'une description, parfois très succincte, dans la publication de 1896. Cet article vise à réinvestir 735 tombes de cette nécropole, dont un grand nombre étaient jusqu'ici pensées vides ou pour lesquelles la plupart des données étaient perdues (car non représentées dans les carnets de terrain conservés au Petrie Museum de Londres), grâce à un examen approfondi des archives de Petrie, la publication originale, les '*pottery lists*' récemment redécouvertes, et les artefacts connus dans les musées. Ce premier échantillon est publié ici en tant que résultat préliminaire du projet et sera également rendu disponible sous la forme d'une base de données en ligne. Ce réexamen a révélé que les assemblages étudiés contenaient de nombreux artefacts supplémentaires, qu'ils pouvaient désormais être datés ou que leur datation précédente pouvait être révisée, et les assemblages ainsi corrigés nous donnent même la possibilité de souligner des erreurs et approximations dans les modèles typochronologiques actuels, bâtis à partir des inventaires céramiques précédents. Ces résultats préliminaires témoignent une fois encore de l'importance de réexaminer des sites en apparence bien connus à la lumière des données de fouilles anciennes.

Mots-clés : Prédynastique, Naqada, archives de fouilles, céramique, archéologie funéraire.



SOME ARCHAEOLOGICAL SITES have been known for so long that one may wonder whether it is worth reexamining them once more. It could certainly appear to be the case for the site of Naqada, located in Upper Egypt south of the Qena bend (Fig. 1) and known to be the site that gave its name to the most important predynastic culture of Egypt, spanning most of the fourth millennium (*circa* 3800-3100 BCE). Composed of at least one settlement area and various necropoleis, the largest of which being the “Main Cemetery,”¹ it was excavated by William Flinders Petrie and John Quibell in the winter of 1894-1895 and published the following year,² one hundred and thirty years ago today.

¹ Originally called “Great New Race Cemetery” in Petrie’s publication to refer to what he thought was a population of invaders (on this well-known element, see e.g., the historiographic synthesis by K. SOWADA, “The Politics of Error: Flinders Petrie at Diospolis Parva,” *BACE* 7, 1996, p. 89-96), it is now mostly called “Main Cemetery” in reference to its gigantic size (although probably constituted of several originally separated and conjoined cemeteries, see section 3).

² W.M.F. PETRIE, J. QUIBELL, *Naqada and Ballas*, London, 1896.

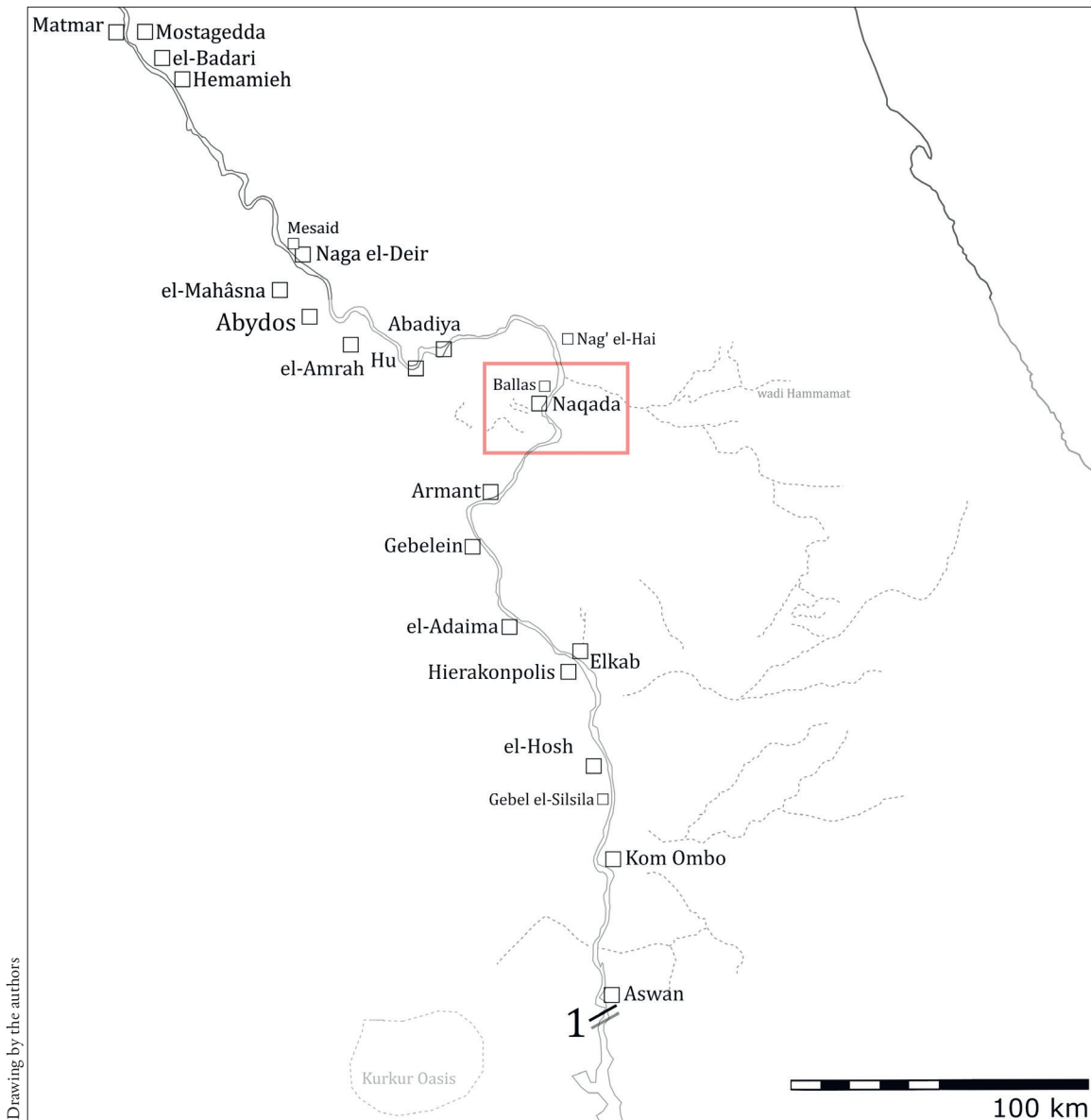


FIG. 1. Map of Upper Egypt, showing the general location of Naqada and Ballas.

Any archaeologist familiar with this site, however, knows that owing to both the speediness of work at the site (“if many hours are given to it each day, that allows but twenty or thirty minutes for a grave [...] often I spent a couple of hours on a single tomb, if it were complex [...] the work could not be allowed to drag, or go on with too much refinement or detail,” Petrie writes in his introduction)³ and the standards of publication of the time, the account of the 1918 tombs excavated (or, at least, numbered—see section 1.4) was, for the longest time, far from detailed enough, and still warrants reexamination. Indeed, the final publication illustrated only 17 graves with a sketch, and a mere 121 more were described in some laconic way, often

³ *Ibid.*, pp. ix–x; see A. STEVENSON, “The Archival Record of W.M.F. Petrie’s 1894–5 Excavations in the Predynastic Cemeteries of Naqada,” in A. Stevenson, J. van Wetering (eds.), *The Many Histories of Naqada: Archaeology and Heritage in an Upper Egyptian Region*, London, 2021, p. 51, for a similar remark.

through vague phrases—such as the description for tomb 238, which, in its entirety, reads: “238. Usual pottery, black-topped, etc. Two lazuli flies.”⁴

This situation, where a little over 7% of the tombs was known, and in a very partial way, was all the more unfortunate for a site that remains the largest Naqada-period cemetery known to this day and one that encompasses all phases of this culture. Fortunately, more data was retrieved in the following decades, thanks to the rediscovery of archival documents as well as several endeavors to re-identify artifacts scattered in museum collections across the world. Forty years after Petrie’s work, Elise Baumgartel volunteered to organize the previously uncatalogued artifacts in the collection of the Petrie Museum, and ended up embarking on a quest to relocate objects from Naqada, which culminated in the publication of a *Petrie’s Naqada Excavation: A Supplement*.⁵ In the 1970s, Joan Crowfoot Payne, curator at the Ashmolean Museum, started collaborating with E. Baumgartel to update this survey,⁶ building especially on the recovery of several of Petrie’s field notebooks in the University College, London. The last in such efforts to relocate objects from Naqada is the larger-scale survey Taichi Kuronuma was able to conduct in 2013–2018 for his PhD thesis,⁷ which he presents in section 1.5 of this article, and to whom we are extremely indebted for generously sharing the results of his work to be integrated in the project’s database. E. Baumgartel and J. Payne’s study was a huge achievement and undoubtedly contributed valuable knowledge, but it still had some limitations and it is essential to recognize the importance of a more comprehensive approach.

Indeed, most recently, the original pottery lists used by Petrie in the construction of his famous ‘sequence date’ system were rediscovered in 2015 by the team of the Petrie Museum, led by curator Alice Stevenson,⁸ and came to complement the field notebooks relocated in the 1960s and 1970s (see 2.1). The fact is that all synthesis works available to date had been museum-oriented, and whilst extremely valuable, they do not document any of the objects which did not make it into the museum samples. This is now made possible by the pottery lists, as well as, notably, the final publication plates, which have seldom been exploited. Nor is there any general study focusing on the contexts of the finds, especially tomb layout, possible phasing, and relations between body(ies) and artifacts, by making use of the tomb plans sketched in the notebooks.

The reconstruction of legacy data from old-excavated sites is crucial for Predynastic and Early Dynastic studies. Indeed, there have already been major attempts at better understanding some old excavations, and the present project follows in the footsteps of the endeavors made for Hierakonpolis, Gerzeh, or Abydos, to cite only a few.⁹

⁴ *Ibid.*, p. 25.

⁵ E. BAUMGARTEL, *Petrie’s Naqada Excavation: A Supplement*, London, 1970.

⁶ J. CROWFOOT PAYNE, “Appendix to the Naqada Excavation Supplement,” *JEA* 73, 1987, pp. 181–189.

⁷ T. KURONUMA, 「紀元前4千年紀ナカダ文化墓制から見た先史社会構造の検討：エジプト・ナカダ遺跡の事例研究」 (“An Examination of the Prehistoric Social Structure Seen from the Mortuary Practices of the Naqada Culture, Fourth Millennium BCE: Case Studies of the Sites of Naqada, Egypt”), unpublished PhD thesis, Tokyo Metropolitan University, 2019.

⁸ A. STEVENSON, “The Archival Record of W.M.F. Petrie’s 1894–5 Excavations in the Predynastic Cemeteries of Naqada,” in A. Stevenson, J. van Wetering (eds.), *The Many Histories of Naqada: Archaeology and Heritage in an Upper Egyptian Region*, London, 2020, pp. 11–55.

⁹ E.g., B. ADAMS, *Ancient Hierakonpolis*, Warminster, 1974; B. ADAMS, *Ancient Hierakonpolis Supplement*, Warminster, 1974; B. ADAMS, *The Fort Cemetery at Hierakonpolis (Excavated by John Garstang)*, London, New York, KPI, 1987; B. ADAMS, *Ancient Nekhen: Garstang in the City of Hierakonpolis*, Whitstable, 1995; for Gerzeh, A. STEVENSON, *The Predynastic Egyptian*

Bringing together this wealth of information became the goal of the NUBTI project (Naqada Unified Base for Tomb Information) launched in 2022 under IFAO's umbrella and in collaboration with the Petrie Museum. For each tomb, the various sources need to be not only merged but also cross-checked systematically, since many of them show conflicted evidence and various kinds of contradictions. One of the most well-known of these problems is the fact that artifacts stemming from tombs 1 through 883 have been labelled in a way that creates confusion with the Ballas tombs bearing the same numbers, excavated during the same season by the same team. Apart from this issue, one can also cite several misidentifications of pottery types in the museums or errors in Baumgartel's inventory principally due to its organization in columns (with objects sometimes printed in the wrong category¹⁰), as well as several other challenges we evoke in the rest of this article, thus making a complete reassessment of the contents of each tomb desirable and necessary for any future studies on this cemetery or taking its data into account.

The NUBTI project aims to create a comprehensive online database recording our current understanding of the contents of any given tomb (as the database is also conceived as evolutive), historic archival data (for reference) and an explanation of the choices made and the thought-process (for accountability and traceability purposes) (see 1.1). Before the online database is opened to researchers and the general public, this interim publication aims to make available the results of phase 1 of the project, which focused exclusively on the tombs represented in the pottery list and/or museum sample collected by the successive efforts of E. Baumgartel, J. Payne and T. Kuronuma, but for which the field notebooks were not preserved, at least not in the current state of known documentation. Phase 2 will then focus on the tombs represented in the notebooks.

The graphs presented in Fig. 2 summarize the state of documentation for each of the 1918 tombs (according to the pottery list)¹¹ in the Main Cemetery. Of these, 788 (in dark gray) are documented in some detail by sketches in the notebooks and/or illustration in the original 1896 publication, while 582 (in light gray) are only known through the pottery lists and, sometimes, artifacts relocated in museums, possibly supplemented by a laconic description or brief mentions in Petrie's original publications, including the 1921 *Corpus of Predynastic Pottery and Palettes*. Finally, tombs whose number is flanked with a dark dot in Fig. 2a represent those assemblages not documented in the pottery list (for seemingly various reasons, see 1.3 and 1.4) but for which at least one artifact was relocated in the museum sample

Cemetery of el-Gerzeh: Social Identities and Mortuary Practices, Leuven, 2009. Additional, similar works include the study of unpublished photographs from Tarkhan (W. GRAJETZKI, "Tarkhan," in J. Picton, I. Pridden (eds.), *Unseen Images: Archive Photographs in an Upper Egyptian Region*, London, 2021, pp. 185–237) and museum-housed potsherds from Koptos (B. ADAMS, *Sculptured Pottery from Koptos*, Warminster, 1986); for Abydos, C. WARD, "Excavating the Archive/Archiving the Excavation: Archival Processes and Contexts in Archaeology," *Advances in Archaeological Practice* 10/2, 2022, pp. 160–176.

¹⁰ E.g., as underlined by J. Payne, for tomb 355, where the L7c vase was mistakenly included in the "stone vases" column, or for tomb 792, where a P74 is called by error a B74 by being included in the Black-topped column.

¹¹ This is the highest number normally retained both in E. Baumgartel's inventory and in the pottery list. However, the original publication does mention, perhaps by mistake, the existence of an apparent tomb 1939 (flint plate, W.M.F. PETRIE, J. QUIBELL, *Naqada and Ballas*, London, 1896, pl. LXIII.66). S. Hendrickx, on the other hand (*De Grafvelden der Naqada-cultuur in Zuid-Egypte, met bijzondere aandacht voor het Naqada III Grafveld te Elkab: Interne chronologie en sociale differentiatie*, vol. II: *Tabellen en bibliografie*, unpublished PhD thesis, Katholieke Universiteit van Leuven, 1989, p. 372, seems to relocate an artifact from a tomb 1953, which is also consistent with J. Crowfoot Payne's affirmation that the Main Cemetery was "numbered from 1 to 1953" (*JEA* 73, 1987, p. 181).

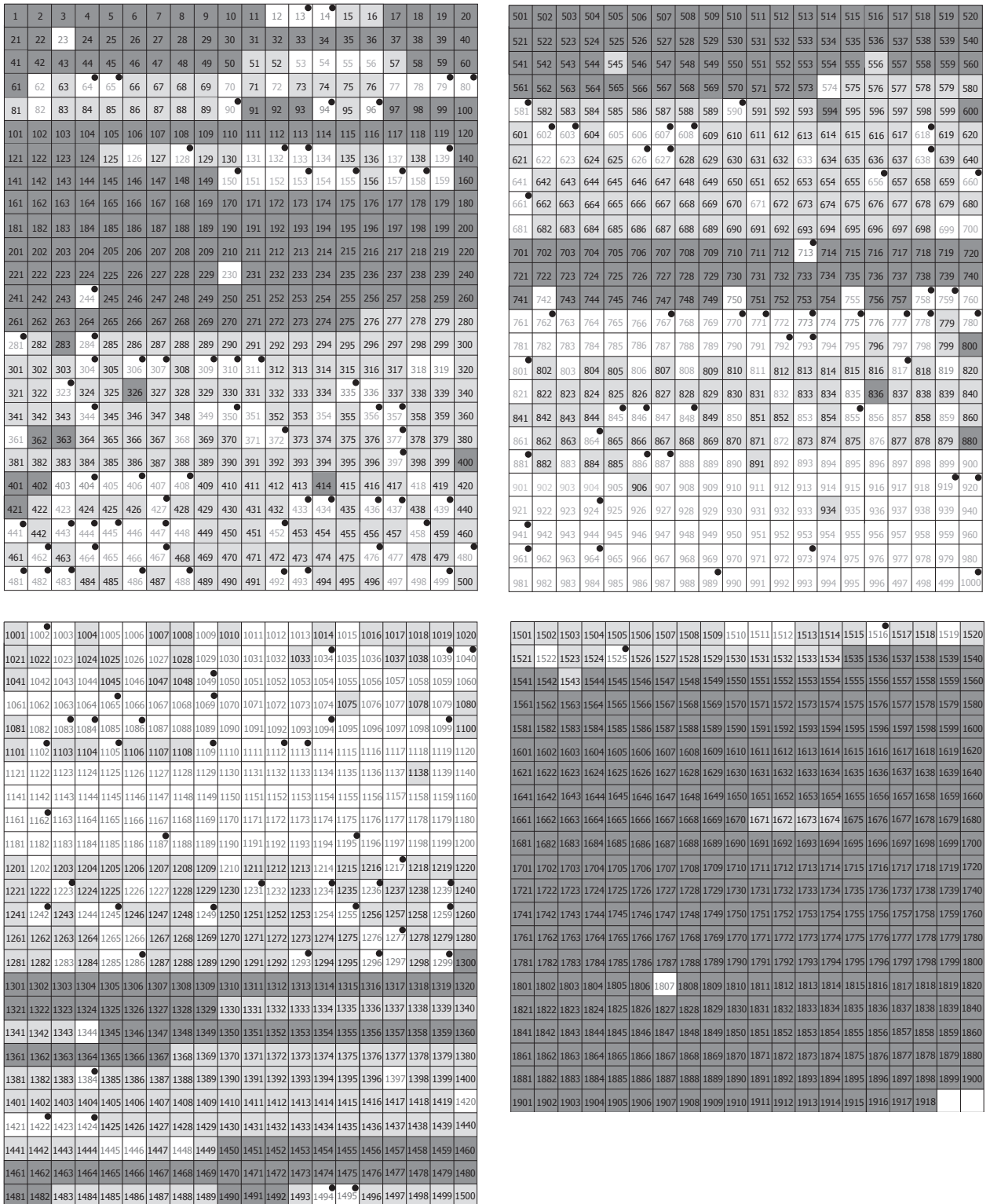


FIG. 2. Charts illustrating the state of documentation for each tomb in the Naqada 'Main Cemetery'.

a. Complete visual representation of the status of each tomb (dark grey = illustrated in the notebook and/or original publication; light gray = documented in the pottery list; white background = no preserved archival documentation; black dot = artifacts are listed by E. Baumgartel or J. Payne for this tomb, sometimes disproved by later work).

as studied by E. Baumgartel and J. Payne; in some cases, subsequent work,¹² including our own, has proposed that these objects had been wrongly attributed to this tomb (see Annex, e.g., tomb 661). The rest of the tombs, shown in light gray writing on white background in Fig. 2a, are not represented in the notebooks, nor with artifacts relocated in the museum sample, and appear as an empty line in the pottery list, therefore their data is currently considered to be lost (if they were excavated at all, see 2.5). These represent 27.8% of the whole cemetery in the current state of archival documentation (Fig. 2b).

In total, 735 tombs are examined in the data paper table provided with this article (25 of which were concluded to be empty¹³ in the current state of knowledge after cross-checking all information), and a summary of the findings and especially interesting case studies is presented in the subsequent sections of this paper. We first review the sources and methods used, examining the priceless contribution but also identifying the limitations of the pottery lists in reconstructing the ceramic assemblage of the tombs.

We then examine the way this documentation is constructed, in an attempt to understand the excavation strategies of Petrie and his team, and hypothesize possible reasons for the current gaps in documentation which may not be solely due to the loss or destruction of part of the archive after all. On the other hand, a section by Taichi Kurohuma presents his recent work and shows how a large part of the assemblage of the tombs can still be reassessed through the museum sample, thus completing the endeavor started by E. Baumgartel and J. Payne.

We then present concrete preliminary results of the project, in the shape of:

- tombs for which a reconstruction drawing can be proposed based on the description in the original publication and the individual artifacts known by comparing the archive and museum data;
- tombs that were thought to be empty in the older inventories but have been found, thanks to our reassessments, to contain several artifacts;
- tombs that can now be dated more or less narrowly, which either were not found to contain datable material in previous studies or whose date was mistakenly assessed due to an erroneous assemblage.

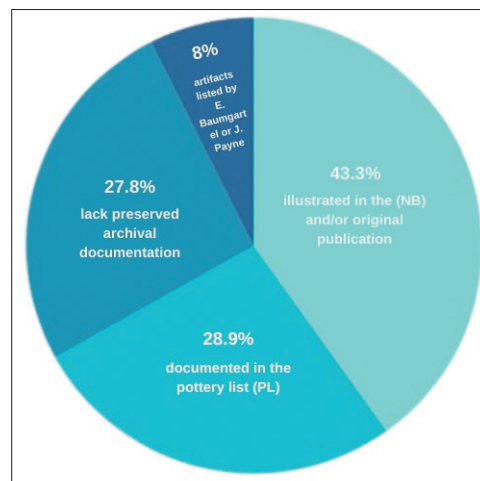


Fig. 2b. Percentages for each category of tombs: 43.3% are illustrated in the notebook (NB) and/or original publication (red), 28.9% are documented in the pottery list (PL) (green), and 27.8% lack preserved archival documentation (blue). Within the latter, 8% have artifacts listed by E. Baumgartel or J. Payne (blue).

Infographic N. el-Hassanin

¹² Through T. Kurohuma's and B. Vanthuyne's researches mostly, but also the dedicated work of museum staff, e.g., C. REGNER, *Bonner Sammlung von Aegyptiaca 2: Schminkpaletten*, Wiesbaden, 1996, and *ead.*, *Bonner Sammlung von Aegyptiaca 3: Keramik*, Wiesbaden, 1998, as well as J. PATENAUDE, G. SHAW, *A Catalogue of the Egyptian Cosmetic Palettes in the Manchester University Museum Collection*, London, 2011, to quote just a few.

¹³ We use the term 'empty' in this context in the sense that no specific artifact can currently be ascribed to this tomb through any of the sources available, either in the museum sample, original publication, or pottery list. However, it cannot be excluded that the tomb did contain artifacts that were considered by the excavators too crude or too fragmentary to be mentioned in their field documents or publication.

Finally, we identify some avenues for future research, especially as the newly corrected assemblages now enable us to pinpoint some errors in seriation models built on previous ceramic inventories—specifically, ceramic types that should not be able to coexist in a single assemblage, and yet are attested together in the new Naqada evidence. The last section of the paper presents a synthetic map of the cemetery, color-coded to fit the updated dating proposals for the tombs examined in this paper and propose a preliminary reflection on the cemetery’s development over time based on this partial evidence. All of the results published in this paper’s Annex represent the current state of a work in progress, which may still be subject to evolutions depending on the emergence of previously unknown artifacts and the contributions of other researchers; the online database will reflect such future updates and should be preferred over this static Annex in future research.

I. SOURCES AND METHODS

I.1. Some problems solved and lessons learnt regarding the Petrie excavation team’s handwritten archive

Wafaa HAMZA

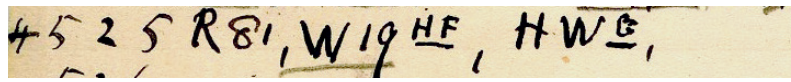
Some of Petrie’s abbreviation systems, especially those referring to the different categories of ceramics, are well known to specialists of Prehistoric Egypt, such as those explained by E. Baumgartel in her re-edition of the Naqada excavation.¹⁴ After our team’s extensive work on Petrie’s archival materials, it is possible to expand on the key to Petrie’s abbreviations she had started to work on. An element that had not yet been noted and which needed decoding as it had a direct impact on the interpretation of the pottery lists, was the “HW” appearing in many lines of the pottery list, accompanied by an underlined upper-case letter. It turned out to mean something referring to H[andle] W[avy], i.e., not the type of the *Wavy-handled* pot itself (which is normally designated with a number, e.g., W19, W43 etc.), but the shape of the handles themselves, along with the shape of the pot. Indeed, these letters correspond to the typology of handle shapes Petrie had illustrated in the publication of the site, plate XXXII—meaning that he had the specific intention of studying correlations between handle types and pot shapes as part of his effort to establish a first seriation and typo-chronology of Predynastic ceramics.

As is usual with handwritten archive, some numbers are unclear and difficult to decipher. In such cases, for the sake of completeness, we have entered all possible alternative types, e.g., in tomb 1295 “B51a or B57a” (see Fig. 4a). Thankfully, this sort of problem was only encountered on ten tombs for the sample presented here and in some cases, it was solved by the complementary examination of the Sequence-Dating slips.¹⁵

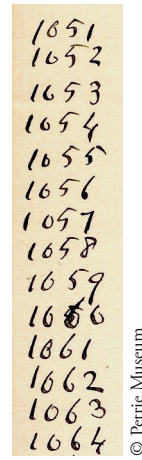
One ‘other lesson learnt’ worth mentioning is the fact that, in many of the Petrie team’s handwritten archive, os and 6s take a very similar shape, due to the distinct way of tracing zeros of the person who wrote the pottery lists (probably Petrie himself): compare the shapes of the

¹⁴ BAUMGARTEL (1970), *op. cit.*, frontispiece.

¹⁵ See Annex, tombs nos. 90, 316, 321, 345, 619, 837, 863, 1238, 1295, 1376, 1500, 1531.



a.



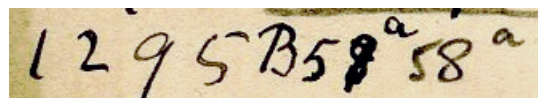
b.

FIG. 3a. Tomb 525 taken from the Pottery list published by A. Stevenson (2020), *op. cit.*, an example for the “HW” code mentioned by Petrie beside the pottery type; b. Examples, from the pottery lists, for os and 6s that have a very similar shape

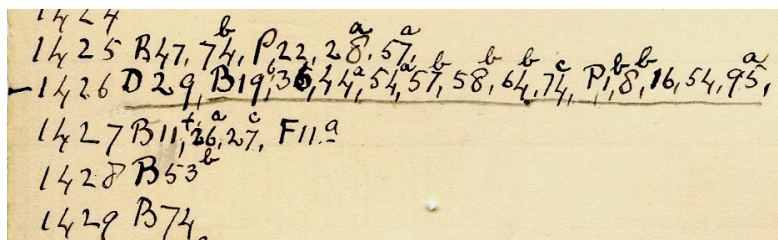
zeros throughout the list in Fig. 3b. This very probably accounts for some of the misread numbers in the excavator’s marks (see especially 1.5), and in particular the confusions between tombs in the 1600s and 1000s. A particularly illustrative case is tomb 1049: initially, E. Baumgartel incorrectly identified the presence of an R47 pot; subsequent Artifact Examination (AE) and verification through the Pottery Lists (PL) confirmed the absence of the R47 pot, which in fact belonged to tomb 1649. There is even the possibility that such mistakes occurred at the time of copying the tomb number on the object from a pencil mark to a definitive inking.

A problem more specific to Petrie’s handwriting concerns the similar shape sometimes taken by letters ‘B’ and ‘R’ in the pottery list, which is problematic given the widely different types that they refer to. In all instances, however, careful examination has enabled us to attribute the correct type. In tomb 1425, for example (Fig. 4b), the first letter indeed looks like an R, yet it is very likely that it is an unfinished B, since the pottery lists are always ordered in the same way—D-wares first, then Black-topped, then Red-polished, and Rough-wares only towards the end. Since the types that are difficult to read occur before the ‘P’ category, it is safe to be considered as a B; a similarly unfinished but nevertheless unmistakable ‘B’ can also be seen a few lines below in the same pottery list sheet for tombs 1428 and 1429.

These few remarks are intended to serve as a reference to ease the work of future researchers tackling the Naqada archive, as well as for our upcoming phase of the project, which will no doubt result in a more extensive key to the abbreviation system(s) used by Petrie’s team.



a.



b.

FIG. 4. Problems in deciphering parts of the pottery list. a. pottery list for tomb 1295, with ink smudge; b. pottery list for tomb 1425, with misshapen B.

1.2. The new contribution of the pottery lists to discriminate between Naqada and Ballas and a key to navigating the attached ‘data paper’

Nader EL-HASSANIN

One of the main goals of researchers since E. Baumgartel’s pioneer inventory of the museum sample has been, for the first 883 tombs, to try to discriminate between objects from Naqada’s Main Cemetery and objects from Ballas, excavated at the same time and numbered and labelled in the exact same way. Since the objects could not be differentiated by their markings, this discrimination attempt could only rely on archival data, especially the Ballas notebooks, extensively used by J. Payne in her ‘Appendix’. This effort is still ongoing, with Bart Vanthuyne recently presenting the results of a large investigation of the assemblages from Ballas;¹⁶ our project has benefited a lot from his indications regarding, especially, the collections of the Oriental Institute, Chicago, and other personal communications for which we are indebted to him.

The newly available pottery lists have, as far as we are aware, never been exploited yet by researchers in a systematic manner (with the exception of B. Vanthuyne’s Ballas project), but they serve as valuable sources for discriminating between artifacts from Naqada and Ballas. Intended by Petrie to serve as a basis for the very first ceramic “seriation” attempt in the history of archaeology, these lists are supposed to thoroughly record all the pottery types found in each tomb. Some limitations, however, stem from this very *raison d’être*, since they do not provide information regarding the number of pots of each type—meaning that, in the database, only one pot of each type is recorded by default, but in several cases, a number of pots of the same type have been relocated in the museum sample.

The attached ‘data paper’ relies for a large part on those newly available pottery lists, both to try and discriminate between Ballas and Naqada assemblages in the tombs numbered 883 and below (as well as 1436-1496),¹⁷ and to complement the ceramic assemblage known from the museum sample for all tombs. All additions or reattributions to other tombs based on information contained in the pottery lists are signaled with the abbreviation ^(PL), or ^(BPL) in the cases where reference to the pottery lists for Ballas tombs helped to discriminate between the two sites.

The protocol followed in our attempts to discriminate between artifacts from Naqada vs. from Ballas is composed of four steps:

1. Is this object mentioned in the **original publication** (*Naqada & Ballas*) and/or **Corpus of Prehistoric Pottery and Palettes** as coming from this tomb? (See also 2.2.).

¹⁶ B. VANTHUYNE, H. McDONALD, “Reassessing, Rediscovering and Contextualising Quibell’s 1894-1895 Ballas Excavations and Finds in Egypt,” oral communication at *Egypt at its Origins* 7, Paris, 2022.

¹⁷ Although tombs at Ballas were numbered by J. Quibell from 0 to 883, a mishap with J. Duncan’s participation to the excavations at Ballas resulted in a duplication of tombs number 436 to 496, which was solved by adding an extra ‘1’ in front of the number. Although this does not seem to have had an immense impact on the attribution of museum sample to either the 1400-something tomb in Naqada or the corresponding (1)400 duplicate tomb in Ballas, we have identified so far two instances where the artifacts found in the museum sample suspiciously match the data in Duncan’s notebooks, namely tombs 1443 and 1483, where we suggest they should be reattributed to the corresponding (1)443 and (1)483 tombs from Ballas (see Annex). See also the recent publication by Xavier Droux tackling this problem in part: X. Droux, “Revisiting Petrie’s Excavations at Naqada: Cross-matching the Available Documentary Evidence and New Digital Map”, *IntEg* 3/1, 2024, pp. 1–59.

2. If not (and if the item is a pot): Does this object correspond to a type mentioned in the **pottery list** for this tomb? Does it look similar to a type in the pottery list (e.g., types B47 and B72a are very often written in lieu of each other, owing to the well-known repetitions and recurrences within Petrie's typology)?¹⁸ (See also 1.3.) Was the type accurately described by E. Baumgartel and J. Payne and, if not, can its type, as reassessed from direct artifact examination (noted ^{AE} in the data paper), be matched to an occurrence in the pottery list?
3. If not (or if not a pot): Does this object appear in one of the **archival sources on Ballas** for the tomb of the same number (if relevant)?
4. Was the **tomb number on the object read incorrectly** and confused with a similar-looking number? Does this object appear in the description (in the original publication) or pottery list of another tomb with a similar-looking number? In such cases where Taichi Kuronuma (see 1.5) or our work proposes a reattribution of the artifact to another tomb, this is noted in the data paper as ^{WN} (for 'wrong number') followed by the new assigned tomb number.
5. If none of the above: Is the item **chronologically consistent** with the rest of the assemblage for this tomb? (And, in cases before tomb 883, does it match the chronological range of the Ballas tomb with the same number better? But see 2.4.).

Correspondingly, we have chosen to only record artifacts as from either Naqada or Ballas when we could identify an explicit mention in any of the sources; wherever none of the steps in the protocole brought positive clues, the item has been registered with a question mark in the Annex.

As has become clear from the above, one of the main goals of this data paper has been to explicitly describe, for each decision, the thought-process and source used to corroborate this choice, for accountability, research replicability, and easy future correction where needed. This element was lacking in J. Payne's 'Appendix',¹⁹ and, although her proposals to "delete" were mainly substantiated by the examination of the Ballas notebooks, as became clear throughout our work,²⁰ the absence of any mention of the origin of the data meant that her work, too, ended up having to be cross-checked. In some cases, the collation of all available evidence led us not only to complete but also, sometimes, to recuse some of J. Payne's propositions,²¹ e.g., for tomb 804, where J. Payne had proposed to "delete beads, faience,"²² almost certainly because the beads are mentioned in the notebook for Ballas tomb 804 (notebook 147), but

¹⁸ On this problem, see especially S. HENDRICKX, "The Relative Chronology of the Naqada Culture: Problems and Possibilities," in J. Spencer (ed.), *Aspects of Early Egypt*, London, p. 36 *sqq.*; R. HARTMANN, *Umm el-Qaab IV: Die Keramik der älteren und mittleren Naqadakultur*, Harrassowitz, 2016, esp. p. 50.

¹⁹ There is a rather vague mention, in her introduction, that her main sources are "original records of Petrie's excavations [...] found [in 1982] [...] [which] include most of the records for both the Naqada and Ballas cemeteries," with quotation of Janine Bourriau's original article (J. BOURRIAU, "Museum Acquisitions, 1982: Egyptian Antiquities Acquired in 1982 by Museums in the United Kingdom," *JEA* 70, 1984, p. 130), which itself references the rediscovery of the notebooks specifically and not any other document.

²⁰ See Annex, tomb nos. 150, 281, 324, 385, 404, 419, 441, 447, 450, 488, 491, 494, 575, 576, 582, 583, 588, 590, 595, 597, 598, 602, 608, 624, 638, 646, 648, 649, 656, 676, 683, 759, 770, 771, 777, 779, 799, 801, 810, 814, 837, 867.

²¹ See Annex, tomb nos. 341, 435, 441, 450, 473, 644, 804, 1379.

²² CROWFOOT PAYNE (1987), *op. cit.*, p. 186.

without noticing the fact that Naqada tomb 804 did have a short description in Petrie's original publication, reading: "In front of the arms a group of beads, two ivory pins [...], a bag of malachite, and a lump of galena."²³ Although it would be rather impossible to discriminate which tomb 804 these beads belonged to when they are both known to have contained some, it is worth noting that the other items—malachite and galena—known to come from the Naqada tomb are registered together with them under the same inventory number in the Petrie Museum, leaving little doubt that they were sent as a coherent package originating from the same tomb.

1.3. Problems and limitations of the pottery list

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The pottery lists thus provide very valuable insights into the contents of tombs. However, it is clear from a closer look that they do contain errors and cannot be trusted blindly. Several cases of inaccuracies and omissions that were noted when working on the tombs are presented in the following section.

a. *Discrepancies between the archives and the final typological system*

One element which needs to be briefly mentioned is the fact that the typological system designed by Petrie underwent changes and evolutions throughout his work. This is especially clear in the case of tomb 1279, for which the pottery list clearly mentions a 'R10' type, but such a type is missing in the numbering of the *Corpus* as well as in the original publication—jumping from 8 to 11 and then to 12.²⁴ A related issue is that of D-ware typology, although it is easily corrected: between the original 1896 publication and the formalization of the ceramic typology in the *Corpus*, some types were renumbered by Petrie, e.g., type 8c became type 10k. The C- and D-ware types (and other types which had undergone renumbering between the *Naqada* publication and the *Corpus*) indicated in the pottery list have therefore systematically been converted to *Corpus* types in the Annex to this paper.

b. *Omission in the pottery list of types known from other sources*

But one of the main issues of the pottery list is the fact that they can miss some types or even present a tomb as empty when we know from other archival sources that one or several pots were indeed included in this tomb. Indeed, whenever both the pottery list and the notebook are preserved for a given tomb, they do not always correspond; a striking example is that of Ballas tomb 428, which is illustrated both in notebook 145 and in the 1896 publication²⁵ as containing L36, L72 and W62 types, but whose pottery list inexplicably mentions only a type B62b.

Even when the notebook is not preserved, the presence of discrepancies is clear when the pottery list can be compared with the description, however short, available in the original

²³ PETRIE, QUIBELL (1896), *op. cit.*, p. 27 (our emphasis).

²⁴ *Ibid.*, pl. XXXVII, and W.M.F. PETRIE, *Corpus of Prehistoric Pottery and Palettes*, BSAE 32, London, 1921, pl. XXXVIII.

²⁵ PETRIE, QUIBELL (1896), *op. cit.*, pl. V.20.

publication: for example, for tomb 1416 it mentions “pottery Black-topped,”²⁶ and yet the pottery list does not mention any Black-topped (only type P4). Similar discrepancies are found in many tombs, including 343 (a D-ware jar appears in the description, p. 26, but is not mentioned in the pottery list), 430 (same problem), 1220 (same problem), 1037 (“ash-jars rather late, elongated” mentioned in the original description, p. 27, meaning L30, 31 or 33 type, but absent from the pottery list), 1233 (L40 type appearing in the description, p. 27, but not mirrored in the pottery list), 1247 (idem with “seventeen ash-jars,” meaning either R81 or L30 conical jars, but neither type appears in the pottery list), 1248 (L34b mentioned p. 27 but missing in the pottery list), 1377 (a “pan” mentioned in the original description p. 30 but no corresponding bowl or dish shape in the pottery list) and 1485 (same problem regarding the “five large bowls of black and red,” p. 28).

This also happens with archival documents that were apparently still in existence at the time of E. Baumgartel (but are not available anymore), and which she transcribes in the last column of her table when available. One can cite the case of tomb 244, for which E. Baumgartel transcribes “16 pots: 2 r.b., 3 r.p.”²⁷ while the pottery list is left completely empty.

Lastly, the pottery list may also contradict evidence from the original publication (for instance, in tomb 1253, a P40c relocated by E. Baumgartel in the museum sample is not mirrored in the pottery list, and yet it must come from this tomb, as its incised mark is explicitly designated in the 1896 publication as from this tomb)²⁸ or from the *Corpus of Predynastic Pottery and Palettes*, where types are sometimes accompanied (on the lower left corner) with a mention of the tomb they came from—in the case of Naqada tombs, prefixed with an ‘N’. For example, the pottery list for tomb 1411 does not mention the F61 ceramic box relocated by E. Baumgartel (Petrie Museum inv. no. UC 4307), and yet its association with this tomb is confirmed by its mention in the *Corpus* as coming from “N[aqada] 1411.”²⁹ The same goes for tomb 1426: whereas its types B6e and B21e are explicitly identified in the *Corpus* as coming from this tomb (Fig. 5a-b), the pottery list does not record them, or at least not as such. However, comparable shapes are mentioned in the pottery list under the abbreviations B19b and P8b, and were most likely used as alternative designations (and if so, in the case of P8b, erroneous, as the vase in question is clearly a Black-topped). Generally speaking, these elements testify to the changes the typological system has undergone before its formalization in the final publication, during the elaboration of the ‘Sequence-date’ system,³⁰ and, beyond, in the later (1921) *Corpus*.

²⁶ *Ibid.*, p. 28.

²⁷ BAUMGARTEL (1970), *op. cit.*, p. x.

²⁸ PETRIE, QUIBELL (1896), *op. cit.*, pl. LVI.474.

²⁹ PETRIE (1921), *op. cit.*, pl. XVIII.

³⁰ The first ‘Sequence Dating’ (SD) system was finished in 1901, as presented in *Diospolis Parva*, but the original strips of SD held in the Petrie Museum already combined information from the tombs in Naqada, Ballas, Abadiyeh, Hiw and Semaineh, meaning the SD presented in the *Naqada & Ballas* publication was only a very preliminary version (Taichi Kuronuma, pers. comm.).

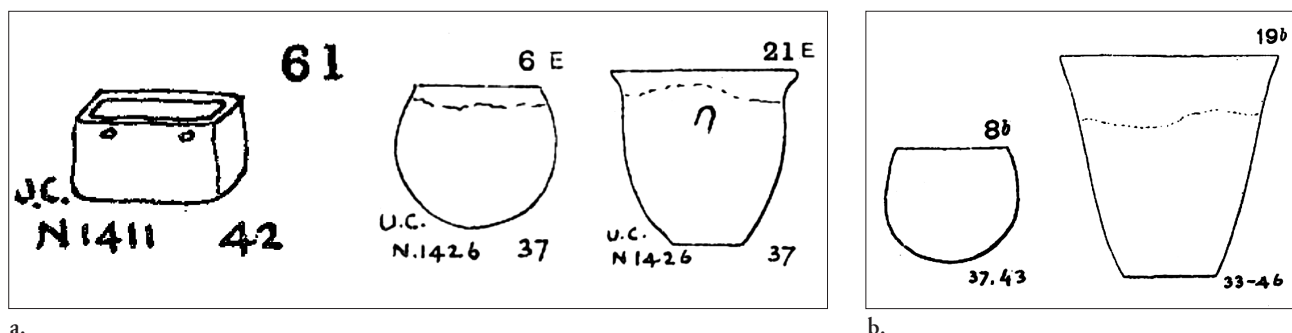


FIG. 5a. Sample of pottery types with mention of the tomb they were found in on the bottom left (after Petrie, Quibell, *Naqada and Ballas*, 1896, pl. XVIII.61, II.6e, III.21e); b. Illustration of pottery types given in the pottery list for tomb 1426 in lieu of B6e and B19b (after Petrie, *Corpus of Predynastic Pottery and Palettes*, 1921, pl. II, IX).

While certain pottery types were thus clearly overlooked in the pottery list, leading to an incomplete record, these omissions appear voluntary and conscious in some cases: it is highly likely that Petrie and his team intentionally excluded types that were too fragmented, too crude, or too atypical, in order to prioritize more typical and well-preserved examples to build their chronology and ‘sequence-dating’ system. In many instances, even where no confusion with Ballas is possible and where no misreading of the tomb number can be suspected, crude types such as the R1/R2/R3 series do not appear in the pottery list even when objects have been relocated in the museum sample as pertaining to that tomb. The fact that the problem is recurring over ten tombs so far³¹ seems to indicate a coherent strategy in the building of the pottery list rather than mistakes in attributing the pot to the correct tomb.

The same happens to be true of atypical vases—for obvious reasons, since the goal is to build a chronology by studying the *recurrence* of each type and its co-occurrence with others. For example, in tomb 1292, a so-called P41m is signaled by E. Baumgartel in the Petrie museum but does not appear in the pottery list; in this case, it is probably because, while its shape is somewhat similar to P41m or a more common D-ware miniature ovoid vessel with lug handles, the fabric is that of a *Rough-ware* (Fig. 6a), which makes it difficult to categorize and useless in building a typology. The same applies to two pots in tomb 1411, especially one (Fig. 6b) akin to a modern mug with its one handle, without any comparative in the Predynastic ceramic repertoire. In other cases, Petrie and his team seem to have chosen to indeed include the atypical vase in the pottery list, but under a slightly unfitting type (see below, d).

Given these lacks or omissions, the fact that a specific vase does not appear in the pottery list has not been considered, in the attached Annex, as sufficient evidence that it did not pertain to this tomb, and therefore they have been indicated with a question mark but not necessarily written off altogether.

³¹ See Annex, tombs 96, 331, 648, Ballas 673, Ballas 683, 688, 695, 818, 826, 1415. By contrast, these types only explicitly appear in the pottery list for tombs 81, 86, 129, Ballas 424, 616, 624, 642, 644, 1291, 1405.

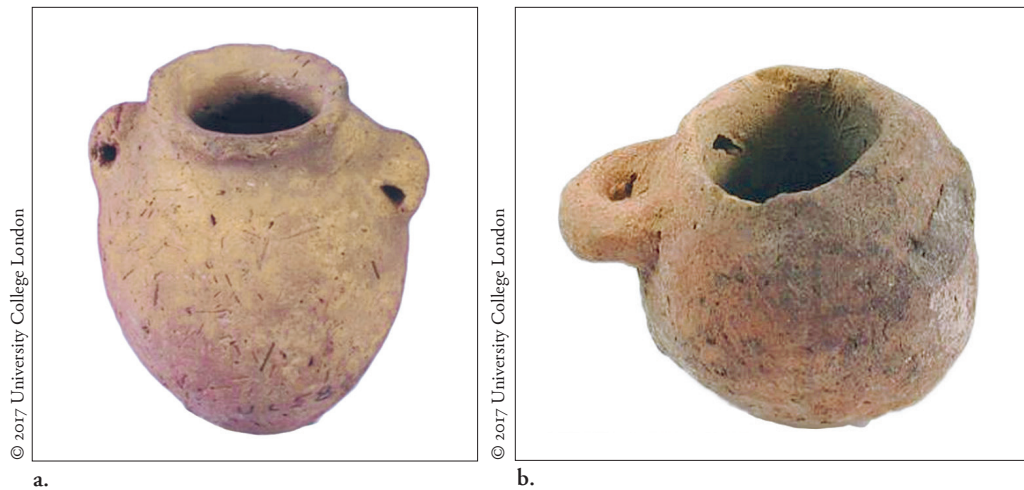


FIG. 6. Atypical objects left out from the pottery list. a. Petrie Museum inv. no. UC 5893, from tomb 1292; b. Petrie Museum inv. no. UC 4306, from tomb 1411.

c. *Likely cases of items recorded under the wrong tomb number*

Finally, the possibility needs to be considered that, periodically, a mixup might have occurred between the parallel pottery lists of Naqada and Ballas for tombs bearing the same number. Indeed, even if the lists for both sites were separated in two different sets of sheets, it seems that they were completed simultaneously, considering a few instances where a type (known to be present in Ballas through the notebooks) has been added to the Naqada list by mistake, then crossed out and reattributed to the correct tomb (Fig. 7).

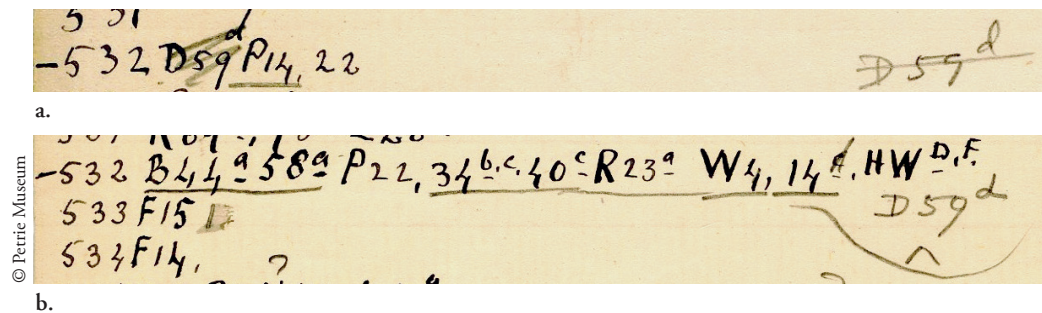


FIG. 7a. Pottery list for Naqada tomb 532, with 'D59' mention crossed out twice; b. Pottery list for Ballas tomb 532, with correct 'D59' mention (clearly a later addition), matching information from notebook 145.

In light of the existence of such occasional confusions (we counted at least 81 instances of deleted types, probably for a variety of reasons, but 50 of them occur in the tomb numbers also attested in Ballas), it would not be impossible that a few of them went unnoticed and therefore uncorrected. In particular, we suspect it might be the case for tomb 435, where the pottery list for Ballas is reported as empty and yet the relevant notebook does show several ceramics³² (Fig. 8), including a cylindrical Black-topped jar, which prompted J. Payne to attribute the one relocated in the museum sample to this Ballas tomb. On the other hand, the type is mentioned in the Naqada pottery list. It might be that, by coincidence, the same type was present in both tombs with the same number; but, given that the Ballas pottery list should clearly not be empty, the type may also have been included in the Naqada pottery list by mistake.³³

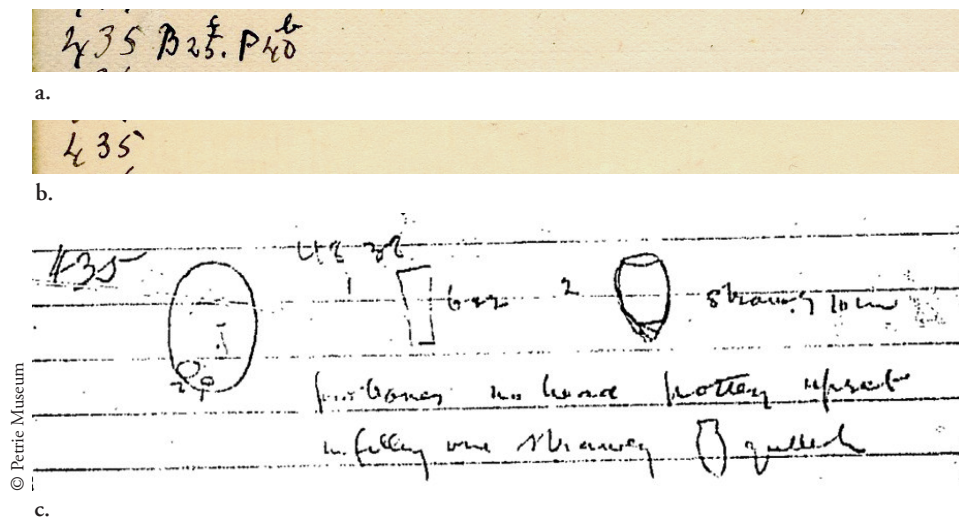


FIG. 8a. Pottery list for Naqada tomb 435; b. Pottery list for Ballas tomb 435 (empty); c. Extract from notebook 145, sketch for Ballas tomb 435.

Similarly, for tomb 337, the pottery list does mention a W80, but the rest of the assemblage is completely incongruent (see also 2.4) with the range of such a late-type cylindrical ‘Wavy-handled’ jar with a hatched band instead of handles (Naqada IIIB in Stan Hendrickx’s estimates), since it includes a B25f, a B47 and a bowl (either Black-topped or Red-polished, to be confirmed),

³² We are assured that these are indeed the Ballas notebooks by the fact that some sketches in these notebooks match the tomb plans for Ballas tombs included in the original publication, PETRIE, QUIBELL (1896), *op. cit.*, pl. V.

³³ Other cases of such mixups are likely to have happened. One probable example is that of tomb 864, where the Ballas pottery list (‘R23a, R34c’) does not match at all the types mentioned in the drawing provided in the original publication for this very tomb (PETRIE, QUIBELL [1896], *op. cit.*, pl. V: ‘R64, R76, R82, R85’ and at least one Wavy-handled type). It could be that the Ballas pottery list was left incomplete, or that it was mistakenly completed with the data from Naqada tomb 864 instead of the Ballas one (the Naqada pottery list for this number is left empty). One other possible instance is the fact that the pottery list given for Naqada tomb 1485 appears suspiciously similar to the objects reported in the notebooks for Ballas duplicate tomb (i)485 (see above, note 17) with the mention of a D-ware as well as a P88. Since the notebook for Naqada tomb 1485 has disappeared, it is not possible to ascertain whether both tombs with the same number happened to have similar pottery or if the pottery list was filled with the information from Ballas instead of Naqada.

which cannot post-date Naqada IID.³⁴ The W80 has been relocated in the museum sample by E. Baumgartel and a possible miscategorization can therefore be ruled out. In this specific case, it is quite possible that the pottery list has been filled in the wrong way, and that the W80 would actually pertain to the Ballas pottery list. It would indeed correspond much more closely to the chronological range of that tomb, which included, according to the original publication (and the corresponding notebook, no. 143), “Wavy-handled pots of late forms (W 62 and 71); they contained mud, one also an ivory spoon.”³⁵

One last example is that of tombs 1080 and 1081. Both are registered in the pottery list as containing type F42, a fairly rare (only one other example is listed for the whole Main Cemetery, in tomb 421) type of double vase, sometimes described as ‘breasts-shaped’³⁶ (Fig. 9). Given that this type is very uncommon, this would be a surprising coincidence. Other explanations could be envisioned,³⁷ but in this case, it is very likely that both are copy errors that instead refer to the vase of this shape clearly documented as coming from tomb ‘108 ½’ (apparently a recarve or annex burial of tomb 108) in notebook 70, page 96 (and in notebook 71, page 28).³⁸

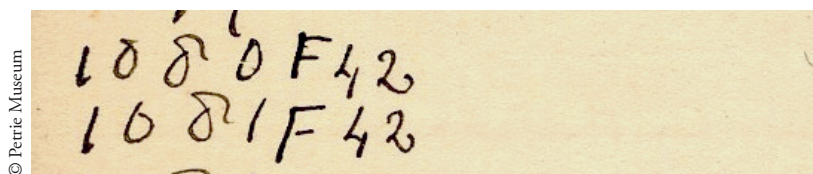


FIG. 9. Pottery list for Naqada tombs 1080 and 1081, with mention of ‘F42’ for both.

Indeed, Petrie never explicitly acknowledges the possibility of the shuffling (*brassage*) of artifacts from one tomb to the fill of another in the process of plundering (nor, for that matter, that of several use-phases of a tomb, see 2.4), but he must have come across such instances in a necropolis as disturbed as the Main Cemetery; plenty of examples of artifacts ‘migrating’ from a tomb to a nearby one are known in recent excavations more aware of that problem, where a big part of the effort is trying to reconstruct what was originally from where.³⁹ Indeed, other plausible cases appear when looking carefully at the archive: for example, a large Black-topped with incised potmarks was found broken into several sherds (Petrie Museum inv. nos. UC 4525, 4526, 5904 and 36068). But while all the sherds refit perfectly together (as well as their engraved motifs), they are registered in the original publication’s plates as coming from both

³⁴ In accordance with recent literature, we do not distinguish between phases IID1 and IID2 as it has been determined that there was no sufficient base for a distinction: see N. BUCHEZ, “A Reconsideration of Predynastic Chronology: The Contribution of Adaïma,” in R. Friedman, P. Fiske (eds.), *Egypt at its Origins 3: Proceedings of the Third International Conference ‘Origin of the State. Predynastic and Early Dynastic Egypt’*, Leuven, pp. 939–950.

³⁵ PETRIE, QUIBELL (1896), *op. cit.*, p. 16.

³⁶ See especially D. CRAIG PATCH, *Dawn of Egyptian Art*, New York, 2012, p. 107.

³⁷ As has been shown to exist in other cemeteries, e.g., R. FRIEDMAN, *Spatial Distribution in a Predynastic Cemetery: Naga Ed Dēr 7000*, MA thesis, UCLA Berkeley, 1981, p. 73; M. MINOTTI, *La parure prédynastique en contexte funéraire : technique et usage. Le cas d’Adaïma*, PhD thesis, EHESS Toulouse, 2015, p. 364.

³⁸ We thank the anonymous reviewer for bringing this element to our attention.

³⁹ In Hierakonpolis cemetery HK6, for example, tomb 24 which contained the remains of one of the elephants was originally thought to have contained a C-ware vessel (R. FRIEDMAN, “Excavating an Elephant,” *Nekhen News* 15, 2003, pp. 9–10), but the vase was thereafter reassigned to tomb 31, where a larger number of fragments had been found (Anonymous, “The Peripatetic Pot,” *Nekhen News* 21, 2009, p. 19).

tombs 293 and 296,⁴⁰ which may be a clue to the fact that the sherds were dispersed in the fill of two nearby tombs. Unfortunately, tomb 296 is not illustrated in the cemetery map (see section 3) and it is therefore not possible to verify this hypothesis.

d. *Miscategorization of items within the pottery lists*

Finally, the pottery lists do not infrequently entail type miscategorizations, which appear clearly when comparing them with the museum sample. When we speak of miscategorizations, we do not mean that this was a mistake on Petrie's part but merely that the system was being designed while also being used, resulting in regular changes between considering a pot as part of a type or as a type of its own. Regardless, the result is a lack of consistency across the inventory, and a recategorization is therefore necessary in order to perform accurate comparisons between assemblages.

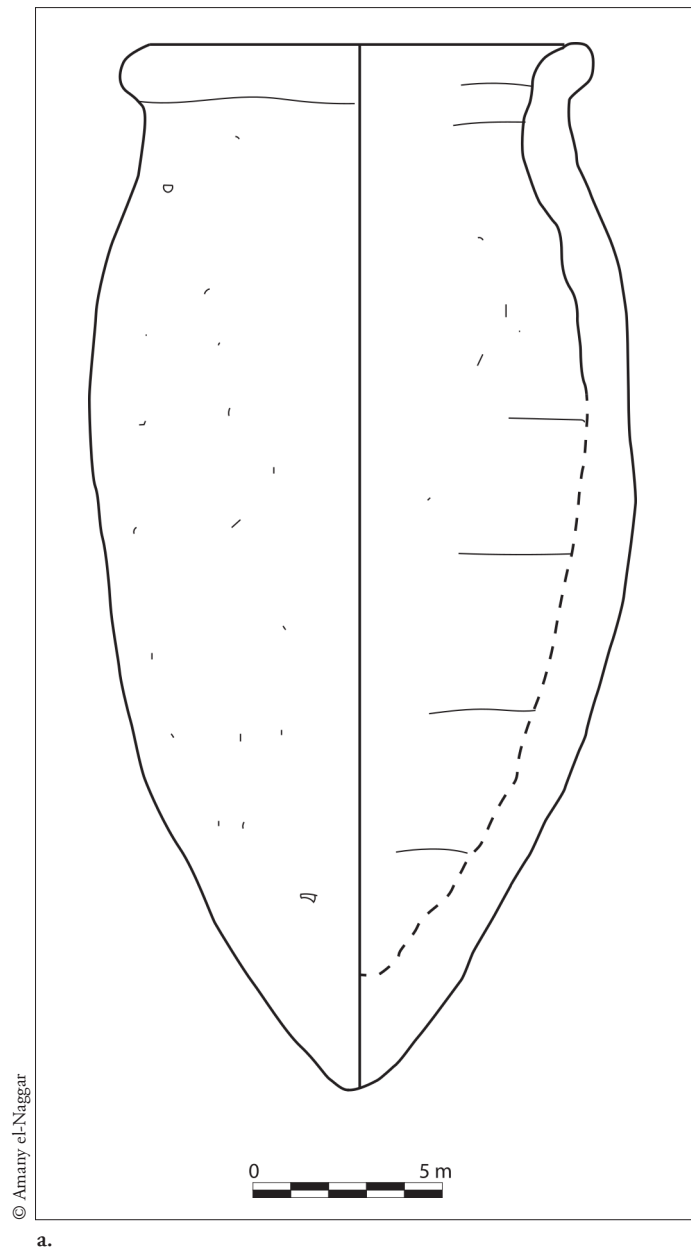
In such instances, and after ensuring that the vase was indeed the one designated by the erroneous code in the pottery list, we have proposed a reattribution to the best possible type in the attached Annex, through the mention ^(PL, AE) (pottery list + artifact examination). The detail of the corrections should be understood as follows:

Example from	Original assemblage	Revised assemblage	Meaning
Tomb 1388	B77d ^(B)	B53a ^(PL, AE)	E. Baumgartel identified this pot as a B77d, but, upon examination, it actually corresponds better to the type originally given in the pottery list (B53a)
Tomb 298	B62b ^(B)	B62b ^(AE) (= B72a ^{PL})	The pottery list mentions a slightly different type (B72a) but, upon examination, E. Baumgartel was correct in identifying this pot as a B62b

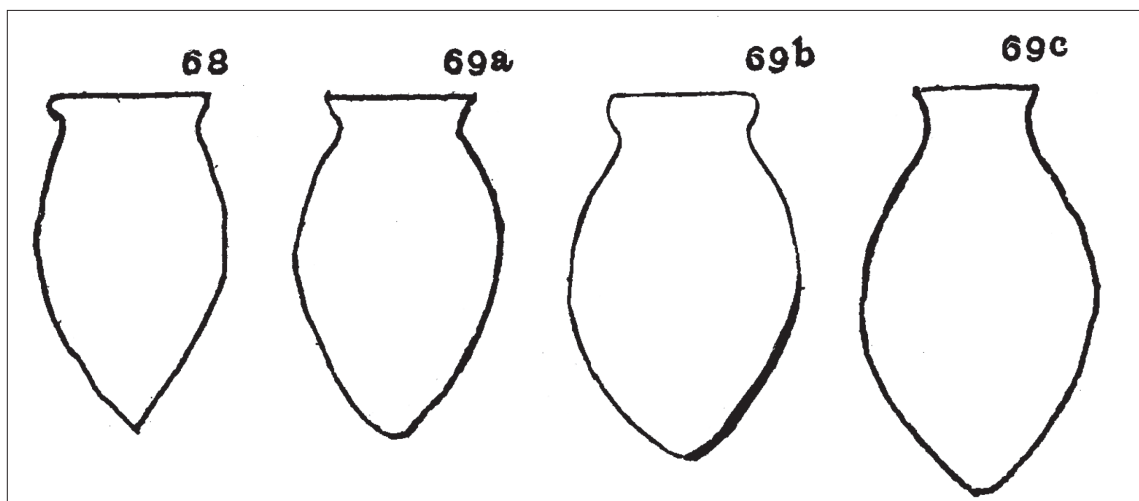
This is for example the case for vase Ashmolean Museum inv. no. 1895.726 from tomb 280, which is clearly designated in the pottery list as a R69c but actually corresponds best to the similar small pointy Rough-ware flask R68a, as can clearly be seen from the drawn profile (Fig. 10).

In several cases, however, the miscategorization seems to stem from a vase being slightly atypical. This unease is clearly visible in cases such as tomb 1411, where the pottery list explicitly adds 'big' next to the mention of type B62b (Fig. 11a), most probably to specify that it is not to be confused with type B62a, which, despite being another subtype of the same category, has a very different shape (Fig. 11b). Interestingly, a corresponding shape in a larger size existed, in the form of type B61a, but this is not what Petrie chose to refer to in the pottery list. Since the object was not found in the museum sample, it is currently not possible to decide whether it corresponded to this type or to understand why it was not chosen as a better categorization than 'B62b, big'.

⁴⁰ PETRIE, QUIBELL (1896), *op. cit.*, pls. LI.6 (noted as both '293' and '296', but '296' is the number underlined, meaning the illustration was copied from this example; in other words, it is not possible that there were two different pots with a similar motif in both tombs), LII.81 and LII.98 (noted as '293' only).



a.



b.

FIG. 10a. Profile of vase Ashmolean Museum 1895.726 from tomb 280; **b.** Illustrations of types R68(a) and R69c from the *Naqada & Ballas* publication (pl. XXXVII) and in the *Corpus of Prehistoric Pottery and Palettes* (same types).

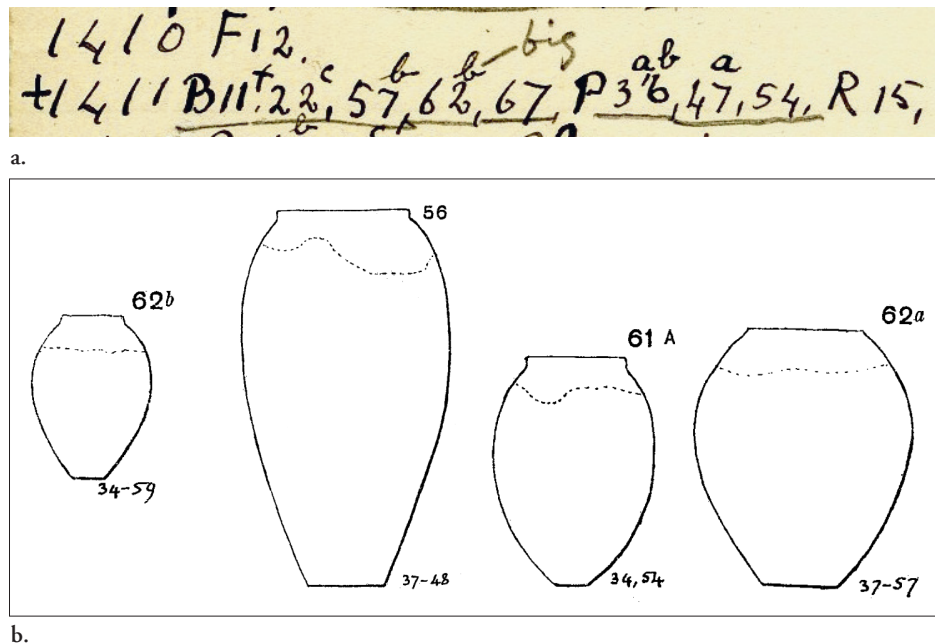


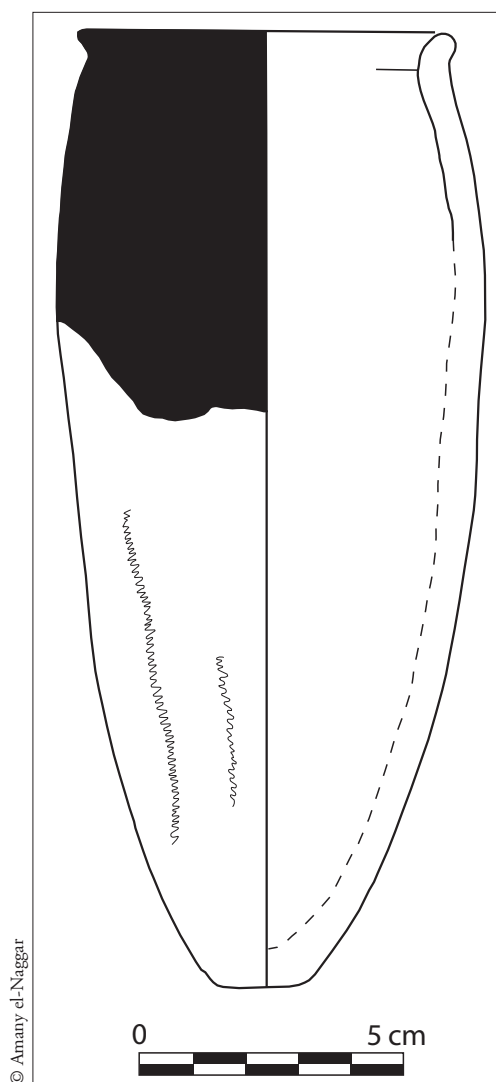
FIG. 11a. Pottery list for tomb 141I; b. Illustrations of B62b and nearby types B56, B61a and B62a from the *Corpus of Prehistoric Palettes and Pottery*.

In other cases, however, instead of acknowledging the slight atypicality, Petrie clearly decided to attribute the pot to a type and consider it an internal variation, even when other types seemed to describe it better. In tomb 378, a vase described in the pottery list as B37a is actually best described as a B36, as can be seen from the profile drawn from direct examination (Fig. 12a), although it does not fully correspond to this shape either and does stand at the crossroads between types B35, B36 and B37a (Fig. 12b), which certainly explains Petrie's choice. While this may appear to be a matter of detail, this actually has important repercussions in current research, since these types are currently proposed as having widely different chronological ranges (IIA-IIC for B36, but IIC-IID for B37) (see 2.4)—although as can be seen from the Sequence Date numbers in Fig. 12b, in Petrie's works, they were clearly thought as roughly equivalent chronologically.

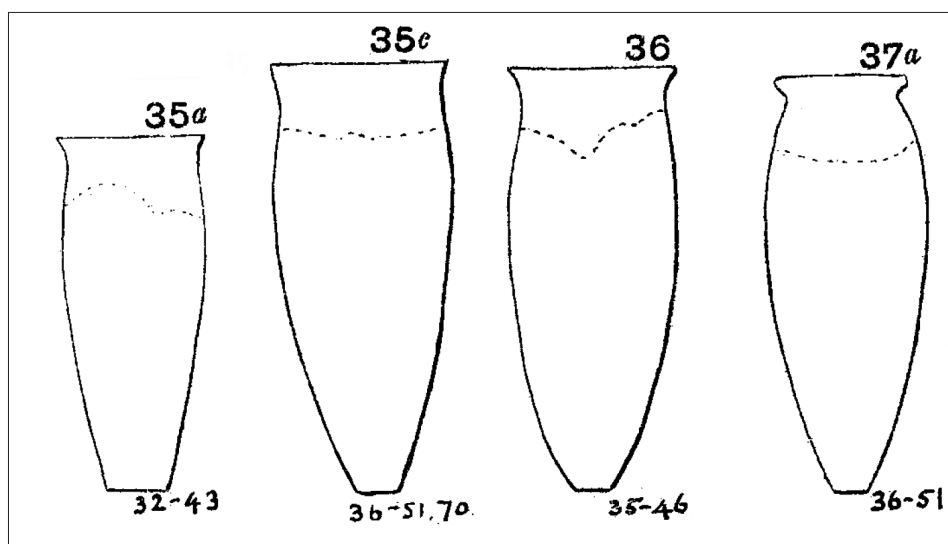
These misidentifications can concern pot shape, but also fabric. A particularly recurring problem in this regard is that of the categorization of L53k/r/w jars vs. R55/56/57 jars (comparable shape but different fabrics, the latter showing straw temper and coarse finish while the former is finer). The former is systematically listed as the latter in the pottery list of several tombs (in this sample, 57, 428, 625 and 1221, the latter closer to R65a in shape). While the mistake could hypothetically stem from Alexander Scharff's determinations as all of these vases have been attributed to the Berlin Ägyptisches Museum,⁴¹ in this case the reason most probably lies in the development of the typological system over time: there was no similarly small shape in the first version of the typology of Late-wares in the 1896 publication,⁴² and therefore they were

⁴¹ A. SCHARFF, *Die Altertümer der Vor- und Frühzeit Ägyptens*, Teil I: *Werkzeuge, Waffen, Gefäße*, Berlin, 1931, pl. 17: inv. nos. ÄM 12944, 12945, 12950 and 12961.

⁴² PETRIE, QUIBELL (1896), *op. cit.*, pl. XLI. We thank the anonymous peer-reviewer for bringing this to our attention.



a.



b.

FIG. 12a. Profile of vase Ashmolean Museum 1895.246 from tomb 378; b. Illustrations of types B35, B36 and B37a from the *Corpus of Prehistoric Palettes and Pottery*.

all attributed by default to the R55/56/57 series regardless of their exact fabric. Interestingly, however, at least one instance of such jars (from tomb 391) is indeed described in the pottery list as L53, without a subtype letter, which would tend to suggest that not all of these vases had exactly comparable fabrics. Unfortunately, it is now impossible to reexamine the four vases sent to Berlin other than through the old sepia photographs included in the 1931 catalogue, since they were all lost in World War II bombings.⁴³

The remarks from this section bring us to the conclusion that, while absolutely invaluable and a crucial document in the advancement of our reconstruction of the Main Cemetery's contents, the pottery lists cannot be taken at face value—even where the handwriting does not present challenges to be deciphered, and even after converting earlier versions of the typological system to its final stage—and have not been simply 'copy-pasted' into the database produced by this project. Instead, they require careful examination, a discerning eye, and good knowledge of the types of pottery, as we have seen that they can be at odds with information from the publication, exclude certain types, depict a tomb as empty while we know from other archival sources that one or more pots were in fact present, and not infrequently contain type miscategorizations, which becomes evident when comparing them to the museum sample. This may very well be what is meant by the mention, at the end of the last strip of the pottery list of the Main Cemetery, stating: "21 omissions / 91 errors } found."⁴⁴ Although it appears to have been made with the same pen and handwriting as several of the additions or suppressions mentioned *supra* (e.g., Fig. 7b), and therefore not include the—probably additional—problems pointed out in this article, which seem to have escaped notice at the time, Petrie and his team were apparently well aware that mistakes were likely to happen when studying such a huge sample of tombs in such a short time and with the involvement of so many different people. For all these reasons, the pottery lists, just like the rest of the documents available to us, had to be cross-checked against all other available sources, which they complete rather than replace. By systematically including question marks in the attached Annex for all uncertain cases, we highlight, in comparison, that all other artifacts have been checked and confirmed, and we acknowledge the need for additional documents if we wish to clarify the presence or absence of these problematic types in a given tomb.

1.4. The empty tombs: hypotheses on Petrie's excavation strategy

Bardis SAMIR

In addition to these various problems in the types mentioned in the pottery list, the fact that a great volume of tomb numbers (687 over the 1918 tombs of the Main Cemetery, i.e., over a third) appear as an empty line catches the eye and warrants further research.

Of course, generally speaking, there can be a number of factors explaining why an isolated tomb could appear empty in the pottery list: firstly, it could be a "poor" tomb, where there was only a body and/or a few items other than pottery, or a very plundered one—a good example

⁴³ Robert Kuhn, personal communication; see also R. KUHN, *Ägyptens Aufbruch in die Geschichte*, Berlin, 2015.

⁴⁴ A. STEVENSON (2021), *op. cit.*, fig. 2.42.

is probably tomb 13, where the pottery list is empty and only five beads and a broken fragment of a hairpin have been identified in the museum sample (possibly pertaining to Ballas tomb 13), leaving the impression of a looted tomb where most artifacts would have been broken and/or mixed up in the fill. Another factor, which we saw already in section 1.3, is that when a pot is fragmentary or when it is considered atypical or too crude, it is typically not entered in the pottery list. In any case, many of the tombs that show up as empty in the pottery list are still represented on the map,⁴⁵ and the reason behind the choice of representing it on the map or not is unclear.

On the other hand, some sheets of the pottery list show more than 50 empty tombs at once, which can hardly be attributed to all of them, by chance, being almost empty or very plundered. This happens mostly for the 900s, 1000s and 1100s (see Fig. 2 graph), as well as for the second part of the 700s, all of which concentrate 563 of 687 tombs shown empty in the pottery list, i.e. 82%. We present these groups one by one as they all exhibit different characteristics and possibly illustrate various excavation strategies on part of Petrie's team.

The first large succession of tombs which appears completely empty in the pottery list is the range from 750 to 799 with only seven exceptions.⁴⁶ While this could point to the fact that the pottery list was just not completed very thoroughly for that part of the cemetery, it is not uninteresting to note that nothing above 754 appears in the cemetery map (Fig. 13). It is also worth noting that in this same range, many of the objects in the museum sample that were previously understood as coming from these tombs have been reattributed to Ballas tombs (see Annex for tombs 759, 770, 771, 773, 775, 777, 780, 792, 793, 799 [at least]), leaving only four tombs—conservatively—with possible artifacts, and none fully confirmed. Finally, in the original publication itself, there is no reported data for tombs above 750.

Tomb no.	Body	Pottery list	Items in museums	Map
906		✓		
920			✓	
924			✓	
934		✓	✓	
941			✓ ?	
961			✓ ?	
973			✓	
1065			✓ ?	

Tomb no.	Body	Pottery list	Items in museums	Map
1075		✓		
1078		✓		
1080		✓ ?		
1081		✓ ?		
1084			✓	
1086			✓	
1094			✓ ?	
1099			✓	

TABLE 1. Summary of data (after corrections) for tombs 900s, 1050-1099 and 1100s. Question marks refer to uncertain items (see Annex).

⁴⁵ Tombs prior to 900 represented on the map but shown empty in the pottery list and without known artifact in museums: 12, 32, 53, 56, 58, 59, 62, 70, 82, 141, 200, 230, 232, 237, 250, 251, 254, 284, 304, 318, 319, 336, 354, 368, 371, 397, 418, 423, 448, 541, 627, 641, 671, 681, 701, 718, 728, 740, 803, 806, 808, 819, 821, 832, 853, 861.

⁴⁶ Tombs 751, 753, 756, 757, 779, 796 and 799 have at least one type mentioned in the pottery list.

Tomb no.	Body	Pottery list	Items in museums	Map	Tomb no.	Body	Pottery list	Items in museums	Map
1100		✓		✓	1112			✓	
1101	✓	✓	✓	✓	1113			✓	
1102	✓			✓	1135			✓	
1103		✓	✓	✓	1138		✓		
1104		✓	✓	✓	1162			✓	
1105	✓				1187			✓	
1106		✓			1195			✓	
1109	✓			✓					

TABLE 1 (continued). Summary of data (after corrections) for tombs 900s, 1050-1099 and 1100s. Question marks refer to uncertain items (see Annex).

The picture appears similar for tombs in the 1000s. While more tombs are represented in the pottery list, it is still overwhelmingly empty (72 compared to only 28 with at least one ceramic type listed), especially after 1050 (only four tombs mentioned with ceramics, all with only one type)—which happens to correspond with the data from the map, as only tombs before 1042 are consistently included in the cemetery plan. It is however possible that the pottery list omitted some types (cf. 1.3), considering that the publication lists a ‘potmark’ for tomb 1070⁴⁷ when its pottery list is empty. Several human remains are mentioned as well,⁴⁸ but again, nothing above 1050.

On the other hand, the range of the 900s is recorded much more poorly still, since not a single tomb in this hundred appears on the map, while only five tombs are documented with certainty to have contained artifacts—all of them only one each (see Annex, tombs 906, 920, 924, 934, 973). In this case as well, no object is recorded in the original publication or in the *Corpus* (flints, potmarks, etc.), nor any body mentioned for these numbers.⁴⁹

Finally, tombs in the 1100s are slightly more frequently mentioned in the pottery list (6 tombs, all before 1140) or in the museum sample (see table 1 and Annex) but only a small number of them—1100, 1101, 1102, 1103, 1104 and 1109) are represented on the map, as seen on Fig. 13.

It seems reasonable to assume that the numbering of the tombs at the site was conducted roughly in order of excavation⁵⁰ and, in most cases, in generally coherent areas. This indeed appears clearly on the cemetery map (Fig. 13). Even if they are more widely scattered (especially tomb 1042, on the far northwest of the eastern part of the cemetery), the 1000s (in red) roughly follow that pattern, filling the gap between the 600s and 800s on the southern limit.

⁴⁷ PETRIE, QUIBELL (1896), *op. cit.*, pl. LIII.142. Also listed is a pottery mark for tomb 1075, for which one type is mentioned in the pottery list (pl. LI.3).

⁴⁸ For tomb 1031 as well as, in E. WARREN, “An Investigation on the Variability of the Human Skeleton: With Especial Reference to the Naqada Race Discovered by Professor Flinder Petrie in his explorations in Egypt,” *Philosophical Transactions of the Royal Society*, B189, 1897, pp. 135–227.

⁴⁹ CICEY FAWCETT et al., “A Second Study of the Variation and Correlation of the Human Skull, with Special Reference to the Naqada Crania,” *Biometrika* 1/4, 1902, pp. 408–467, and WARREN (1897), *op. cit.*

⁵⁰ Even though this is clearly not always the case, as notebook 72 exhibits, where tombs in the 200s and in the 700s are found several times documented on the same page.

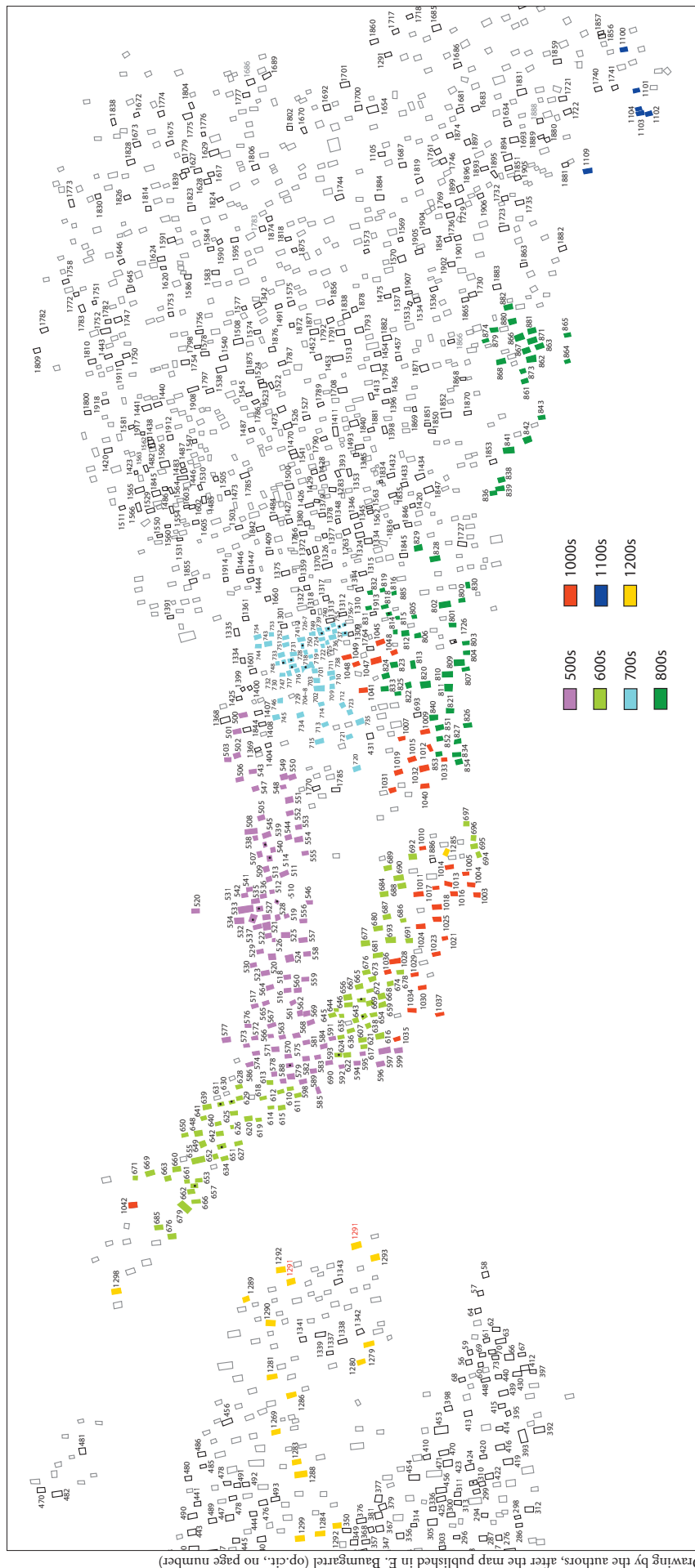


FIG. 13. Digitized map of Naqada 'Main Cemetery' (partial) showing the successive areas of work, distinguished by color.

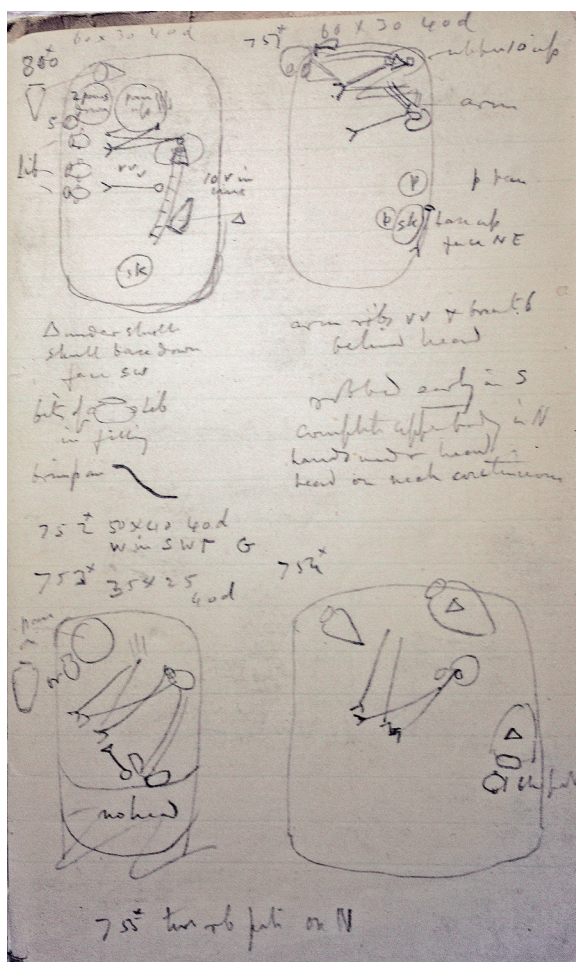


FIG. 14. Notebook 72, page 007, showing field notes for tombs 751 to 755 and then 800.

Another interesting element is that tombs in the 700s are extremely closely clustered (to the point that the original map had to refer to many tombs with letters rather than their complete number, for lack of space to write it). This alone might explain why no tombs above 754 were included in the map, although it would not explain why the pottery lists are empty. On the other hand, even the tombs for which a record is known (most 700-757 are documented in notebooks) are, for many of them, either rather empty or very disturbed. Indeed, most objects in the museum sample originally thought to pertain to this range of tombs have been reattributed to Ballas (see Annex, tombs 759, 767, 770, 771, 773, 775, 777, 780, 792, 793 and 799). The possibility remains, of course, that there were additional notebooks, now lost, documenting these tombs; but the fact that all of these are also lacking in the pottery list, on the cemetery map, and even the inventory of artifacts in museum, makes the fact that notebook 72 jumps directly, on the same page, from tombs 754 and 755 to tomb 800 (Fig. 14) more suspicious. While it is certain that at least some of these tombs were excavated (there are records of skeletal remains for tombs 758, 759 and 765),⁵¹ they may have been considered too poor or uninformative to warrant being documented thoroughly through a sketch or notes. The team

may then have preferred to reallocate their time and efforts to another part of the cemetery if estimating that this sector was too poor or too plundered.

The same phenomenon could also explain the absence of any tomb in the 900s on the cemetery map and barely in the pottery list (only two documented). It is perhaps not unrelated that there is an empty area in the middle of the sectors formed by the 500s, 600s, 700s and 800s, which has not been convincingly matched to a topographic factor preventing the installation of tombs. The fact that a few unnumbered tomb rectangles (gray outline on our map, Fig. 13) are still depicted in this area would tend to prove that there were indeed tombs, but perhaps due to the poor results obtained in the 700s, it would have been decided to move on directly to another sector of the cemetery, or perhaps to excavate just a small number of test tombs, where the results would then have been judged underwhelming, given that both tombs in the pottery list only have one type of vase listed, both simple bowl shapes (P8a and L16). This would also not appear inconsistent with remarks by Petrie stating that he conducted work with more care and detail “in the best part of the cemetery,” i.e., where they

51 WARREN (1897), *op. cit.*

could unravel something other than “a small and plundered tomb [which] often had only a few shifted bones and two or three broken pots in it,”⁵² or that “only one tomb in twenty gave any result of value in either objects or information,”⁵³ hinting that either such cases were not documented because they were not deemed informative enough, or that the ‘bad’ parts of the cemetery were avoided for constraints of time.

If our hypotheses are correct, it would mean that the 900s were never, or barely, excavated, although they do appear to have been numbered, since a tomb 934 has pots in the pottery list and a 973 is known in the museum sample. A further clue to this could be that numbers 1000s were attributed in a less spatially cohesive way, as if they had been used as a way to continue to test the southern boundary of the eastern part of the cemetery and complementing the area with the tombs which could be salvaged in this potentially very disturbed area. This could also explain why the series appears so empty again after 1049 (nothing on the map, four tombs in the pottery list). One hypothesis could be that the team excavated until 1049 at least, then perhaps decided to go test a completely unrelated area and look for the southeastern boundary of the cemetery—indeed, the 1100s sector is very far away—and then moved again quite quickly to the western part to open a sector numbered in the 1200s. If this hypothesis were true, then perhaps they did not excavate the full sequence of two hundred tombs covering numbers 1100–1199. Indeed, only a handful of the 1100s are represented on the cemetery map and nothing is known in the pottery list beyond 1138 (although objects are known in the museum sample for tombs 1162, 1187 and 1195, if the tomb numbers have been read accurately (cf. 1.5), and skeletal remains for 1180).

1.5. A renewed look at the museum sample

Taichi KURONUMA

Despite the exceptional richness of the archival materials, efforts to reconstruct Petrie’s excavations at Naqada have been suspended since J. Payne’s appendix work in 1987.⁵⁴ As mentioned in the previous sections, E. Baumgartel and J. Payne made an exceptional contribution toward this effort; still, several points were missing. For example, they included only information from notebooks nos. 69–72; notebooks nos. 135–141 were not included. Moreover, previously unpublished artifacts from Naqada have been published in catalogs for several museums since J. Payne’s work.⁵⁵ A reevaluation of the museum collections pertaining to Naqada, building on E. Baumgartel’s and J. Payne’s work and correcting and expanding it therefore appeared necessary.

Our general approach to collecting artifact information follows the methodology of E. Baumgartel and J. Payne. Publications and relevant resources, including online catalogs, were reviewed to reconstruct the revised list of artifacts. Some were physically examined when

⁵² PETRIE, QUIBELL (1896), *op. cit.*, pp. VIII, IX.

⁵³ *Ibid.*, pp. IX–X.

⁵⁴ PAYNE (1987), *op. cit.*

⁵⁵ E.g., R. DAVID, *The Macclesfield Collection of Egyptian Antiquities*, Warminster, 1980; HENDRICKX (1989), *op. cit.*, especially for the Brussels collection; PATENAUDE, SHAW (2011), *op. cit.*; J. CROWFOOT PAYNE, *Catalogue of the Predynastic Egyptian Collection in the Ashmolean Museum*, Oxford, 1993; REGNER (1996, 1998), *op. cit.*

there appeared to be a contradiction between the different sources or some doubt as to their identification or type but, due to the large number of artifacts, a selection process was necessary, although the goal is to document as many as possible in the longer term. With the growing popularity of online catalogs featuring high-quality images, artifacts lacking photographs or with limited information (often housed in smaller collections) were prioritized for study to verify their exact shape and material. These selected artifacts were examined through hand drawings, photographs, and a re-examination of the excavator's marks. The excavator's marks provide important clues for reconstructing the context and provenance. Consequently, the views of Baumgartel and Payne were reviewed and updated. This outline of methods generally aligns with those used in the NUBTI project.

As a result of this work, several hundred items were modified or added to the records. For the specific sample discussed in this paper, this amounts to 284 additional items. These modifications and additions can be categorized into several types.

Firstly, we found that E. Baumgartel and J. Payne had not included several artifacts in the previously published catalogs, including some from the National Museum in Copenhagen⁵⁶ and the Egyptian Museum in Cairo.⁵⁷

Secondly, some unpublished museum collections were overlooked, in particular very small or less-known collections. One notable example is the fish palette inv. no. L.1091 in the collection of the Institut de papyrologie et d'égyptologie at the Université Lille III.⁵⁸ Generally, Petrie is not known to have donated artifacts from Naqada to places in France, except for the collection at the université de Strasbourg, which was originally presented to Willhelm Spiegelberg.⁵⁹ Although the university apparently holds no record other than the fact that it came from the private collection of Pierre Jouquet,⁶⁰ there is a very visible excavator's mark '683' whose handwriting and ink color closely resembles examples from Naqada (Fig. 15). The number 683 itself clearly indicates its provenance, as there were no Predynastic tombs labeled with numbers exceeding 650 prior to Petrie's excavations at Tarkhan. Therefore, it is most probable that this palette came from the cemeteries at Naqada; on the other hand, it cannot be fully ruled out that



FIG. 15. Fish-shaped palette held in the université Lille III (collection IPEL, en dépôt au Palais des Beaux-Arts), inv. no. L. 1091, most probably from Naqada tomb 683 (see marking on the tail).

⁵⁶ C. BLINKENBERG, K. FRIIS JOHANSEN, *Corpus Vasorum Antiquorum: Danemark, Copenhague, Musée National (Collection des antiquités classiques)*, Fasc. 1, Paris, Copenhague, 1924.

⁵⁷ F. VON BISSING, *Tongefäße, Erster Teil: Bis zum Beginn des Alten Reiches*, CGC, Vienna, 1913.

⁵⁸ Published in Centre de la Vieille Charité (Marseille), *L'Égypte des millénaires obscurs*, Marseille, 1990, p. 76.

⁵⁹ We must stress that there are some artifacts in Musée Saint-Germain-en-Laye, which certainly came from the Main Cemeteries in Naqada excavated by Jacques de Morgan, labeled as Toukh (J. DE MORGAN, *Recherches sur les origines de l'Égypte*, tome I: *L'âge de la pierre et les métaux*, Paris, 1896; C. LORRE, "La collection préhistorique égyptienne du Musée d'Archéologie Nationale, Saint-Germain-en-Laye, France," in Y. Tristant, B. Midant-Reynes (eds.), *Egypt at its Origins 2: Proceedings of the International Conference 'Origin of the State, Predynastic and Early Dynastic Egypt'*, Leuven, 2008, pp. 1231–1236).

⁶⁰ Frédéric Mougenot, pers. comm.

the Lille palette would be from Ballas tomb 683 in the current state of the documentation. During the re-cataloguing process, several similar cases were detected and included.

Thirdly, the previously identified assemblages were expanded in some tombs. For example, 11 pots were found to be from tomb 1206 (see the Annex to this paper). In this case, the identified pots, of various types (B1a, B19a, B42a, P22, P95a, P95b, F58a, W47, and L82), are now housed in ten different museums across Egypt, the United Kingdom, the United States of America, and Germany.

Finally, the excavation context of several artifacts already listed in E. Baumgartel's or J. Payne's works was clarified by reevaluating the excavator's mark. This modification primarily draws from the recently-published pottery lists. For example, the provenance of the B11b bowl (in the collection of Touchstones Museum in Rochdale) which E. Baumgartel originally published as from tomb 1246 should be corrected to tomb 1240. It appears that the 'o' was misread as a '6' (see 1.1). A similar phenomenon can be observed for the P24K bowl (in the Philadelphia Penn Museum) from tomb 1413, as corroborated by the pottery lists. The reason for its original inclusion in the assemblage of tomb 1415 by E. Baumgartel is unclear, but misreading or misallocation likely occurred. Such cases have been revised and re-integrated into the updated catalog.

The data from this revised catalog were supplied for this paper's project, and further modifications were made, to be published here. Nevertheless, we must emphasize that many unlisted artifacts have not yet been localized. The artifacts appended in this paper are only a part of the entire dataset, and continuous updating is required in the future.

2. PRELIMINARY RESULTS OF PHASE I OF THE PROJECT

The NUBTI project has thus focused on combining all these various available sources. While the results can appear of small scale—adding one or two artifacts here, modifying a pottery type there—, such ant-like work does eventually, over a vast number of tombs and individual corrections, add up to a wide reassessment and, in some cases, completely changes our picture of the tomb record. We present in this section four types of important changes brought about by the project: tombs for which we can propose a schematic reconstruction drawing thanks to the succinct description in the original publication, combined with the pottery list record and museum sample; tombs that were previously thought to be empty (owing to the lack of artifacts recognized in museums at the time of E. Baumgartel and J. Payne) but are now known to have held a sometimes sizeable assemblage; tombs for which a dating can be proposed or reassessed thanks to the new ceramic data, most prominently through the pottery lists; and finally, the potential of this new data for reassessing the dating of several ceramic types in the generally accepted (Kaiser/Hendrickx) chronological models.

2.1. Case studies: Tombs for which a reconstructed tomb plan can be proposed

Cinderella MANNAN

The Annex makes great use not only of the archival data but also of the information contained in the original publication, admittedly very scattered and which had never been systematically exploited until now (see especially 2.2). Among them, the descriptions provided for about a hundred of the tombs have seldom been used; however terse and vague, they do represent, in many cases, the only available data reporting the context of the finds. We therefore used this data to propose a reconstructed plan of the original layout of the tomb; though built on less data (in this case, a photograph was available), this builds on the idea proposed a few years ago by Stan Hendrickx and Merel Eyckerman for two burials in el-Mahâsna.⁶¹

While necessarily schematic and hypothetical, such reconstruction drawings can be useful in that they act as visual aids and can make the information stand out more clearly than the written description they stem from (although they of course do not dispense from this source material, as they include uncertain and imagined, if plausible, elements).

In order to clearly convey visually that these drawings are hypothetical, a dashed line was used for the outline of the tomb, although the dimensions used were those specified in the description, when provided. The pottery and objects have been drawn from the actual artifact and illustrated to relative scale whenever possible. On the other hand, in order to better render the state of a plundered tomb for the reader and not make it seem like their position is well known, they have all been drawn scattered and lying on the side as if not *in situ* (in keeping with Petrie's own conventions in the sketches illustrated in the original publication),⁶² and the items whose placement was not specified by Petrie are rendered in grey. For instance, the 1896 publication's original description for tomb 286 reads: "Body disturbed; seven vertebrae together, fingers and comb together. A patella beneath a jar under a pan. A square bottle of pottery (F. 62b) on west. And a dog's head. Pit 90 × 50, 50 d[ee]p."⁶³ Since no position was specified for any object other than the F26b square bottle and the dog skull, they were represented randomly scattered in the tomb (Fig. 16a).

On several occasions in the publication, e.g., tombs 178 ("body all gone"), 268 ("the body was entirely gone"), Petrie explicitly states that the body was not found *in situ*, or sometimes only few bones such as was the case for tomb 286. On the other hand, in tombs 369 and 430, as the absence of a body is not clearly mentioned, we assumed the possible presence of one body in standard, contracted position, head to south; since there is no way to ascertain that it was there or in this position, however, given that the description does not explicitly state "body normal" as usual, we represent it in grey outline (Fig. 16b, c).

⁶¹ S. HENDRICKX, M. EYCKERMAN, "The Naqada I Tombs H17 and H41 at el-Mahâsna: A Visual Reconstruction," in R. Friedman, P. Fiske (eds.), *Egypt at its Origins 3*, *op. cit.*, pp. 380–428.

⁶² PETRIE, QUIBELL (1896), *op. cit.*, pls LXXXII–LXXXIII.

⁶³ *Ibid.*, p. 6.

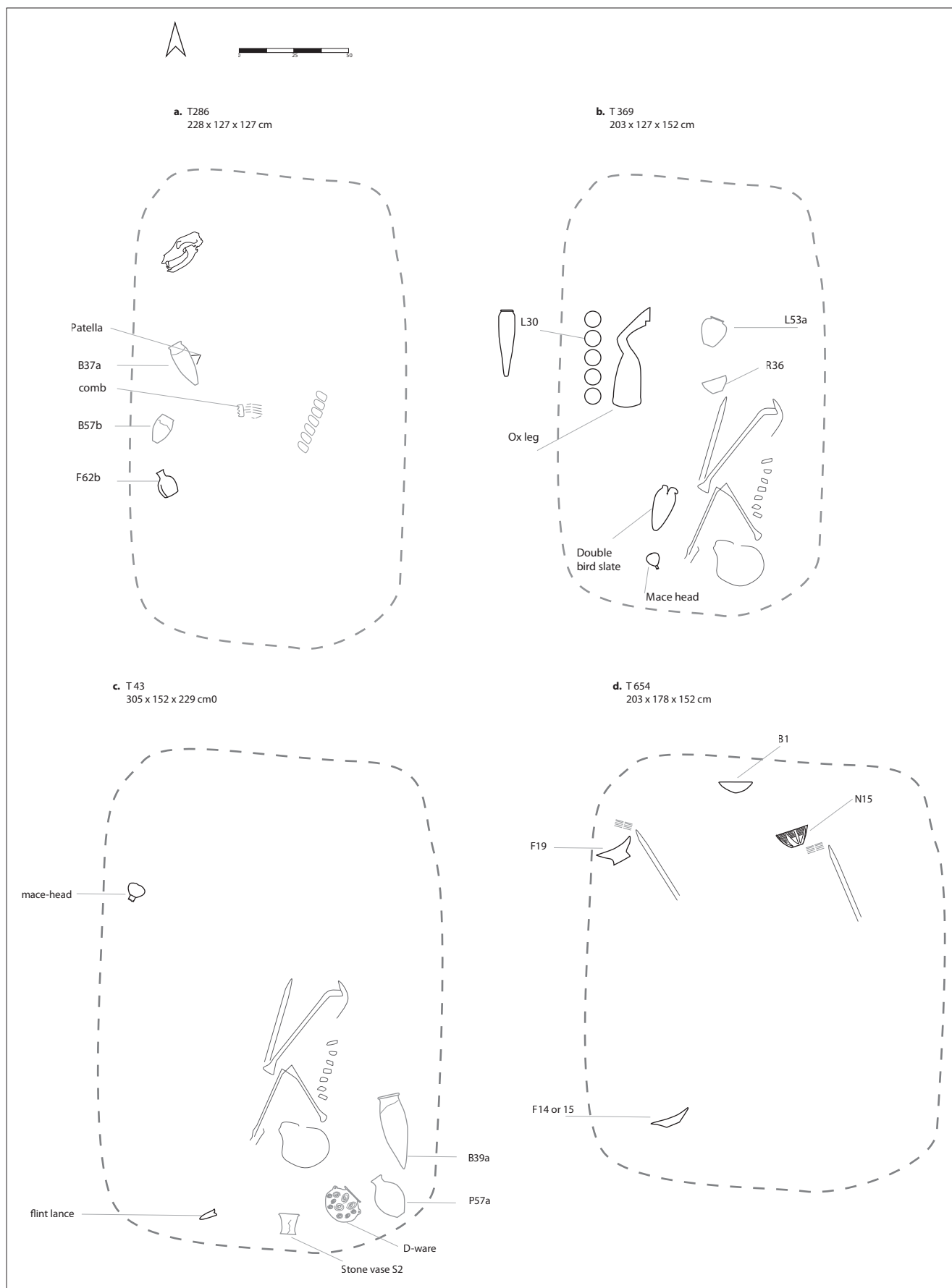


FIG. 16. Reconstructed layout of tombs 286 (a), 369 (b), 430 (c) and 654 (d).

The main value of such drawings is that, through them, the reader can identify at a glance the (known) contents of the tomb in their entirety, even those not mentioned in the description (especially data from the pottery list), without needing to refer to each of the sources previously mentioned. In the reconstructed plan proposed for tomb 369 (Fig. 16b)—described as “an ox-leg placed along the western side in front of the row of jars. A syenite mace [...] at mid-south end, with double-bird slate [...] Pottery rather late; ash-jars long and scanty. Pit 80 × 50, 60 d[ee]p”⁶⁴—the L53 wide-shouldered jar and the R36 bowl, known from the pottery list, have been added to other elements known only in the description, such as the “ash-jars”, which, if “long and scanty”, can only correspond to the elongated L30 jars with their tall narrow base (despite not appearing in the pottery list, see 1.3). The ox leg is represented with Gardiner’s F24 sign in order to avoid confusion with human bones and visually stress the schematic nature of the proposed drawing.

Finally, the descriptions provide at least some information (general as it may be) as to the placement of objects in the tomb, which is best visualized in the form of a tomb drawing, however schematic. This is the case for tomb 430 (Fig. 16c), whose description mentions a general cardinal position for almost all objects: “a flint lance [...] at mid-south end. A stone jar, like VIII, S.2, broken, in S.E. corner; by it a similar pottery jar (XXXV, 67). A white limestone mace-head [...] at mid-east side. Pit 120 × 60, 90 d[ee]p.”⁶⁵ In a context where so much of the information on the context and tomb layout⁶⁶ is lost already, both through plundering (ancient and modern) and because of the lacunary nature of the archive, we suggest that this is a valid way of making use of its information and providing readers with a visual rendering allows some degree of comparison with the other tombs sketched in the notebooks.

These drawings should therefore not be taken as source materials, as the notebooks are, but as already interpreted data, rendered in visual form. This is especially clear in the case of tomb 654: the description says “Few bones left. Over foot at N.E. a black incised bowl [...] At N.W. the other foot, and by it an oval bowl with foot [...] Other pottery at N. and S., of usual forms. Pit 80 × 70, 60 d[ee]p.”⁶⁷ In our interpretation (Fig. 16d), the feet are drawn with parts of the leg bones attached, as “few bones left” seemed to imply their partial presence. Although the tomb seems heavily disturbed, since the feet are in different locations, the phrasing of the description seems to imply that the first, north-east foot was roughly in its original position, and it was therefore drawn as if *in situ*. Schematic drawings of the pottery are added in the same manner as in the rest of the drawings.

⁶⁴ *Ibid.*, p. 26.

⁶⁵ *Ibid.*, *loc. cit.*

⁶⁶ On this point, see, e.g., A. STEVENSON, “The Aesthetics of Predynastic Egyptian Burial: Funerary Performances in the Fourth Millennium BC,” *ARC* 22/1, 2007, pp. 76–92.

⁶⁷ PETRIE, QUIBELL (1896), *op. cit.*, p. 26.

2.2. Case studies: Tombs previously thought to be empty

Marwa ABDEL RAZEK

Another exciting result is that many tombs which were initially thought to be devoid of artifacts, or heavily plundered, could be shown through the reexamination of all archival material to have actually held at least one and sometimes many artifacts. In the Annex, this concerns 126 tombs, with anything from one (in many cases) to four (e.g., tombs 299, 1439, 1518), five (e.g., tombs 384, 692, 1444, 1673), six (e.g., tomb 385) and up to seven items (esp. tomb 1247).

Although it was not completely empty, tomb 301 is one of the most impressive examples. Listed in the previous inventories as containing merely one Red-polished bowl (P15b)⁶⁸ and a Rough-ware flask (R93b),⁶⁹ as these were the only two objects located in the museum sample, the pottery lists confirmed that both these types were indeed from this tomb and not from Ballas, and allowed the addition of no less than eight other types: B27a, B47, B72a, B74c, P22, P23a, P37, P54 and R93b—allowing the date of Naqada IIA proposed by S. Hendrickx⁷⁰ to be confirmed, with a much higher level of confidence. Tomb 1444 similarly had no documented artifacts, but the pottery list enables us to record five vessel types, two of them were actually relocated by Taichi Kuronuma (see 1.5).

Another such case is tomb 823. While only one artifact had been relocated in E. Baumgartel's inventory (a small R69c Rough-ware flask), the extensive pottery list has led to the identification of at least nine different pottery types, possibly ten if the B46 Black-topped jar relocated by T. Kuronuma in the Manchester Museum is to be confirmed as coming from this tomb despite not appearing in the pottery list.

While these complements come mostly from the pottery lists or Taichi Kuronuma's work, several are also recorded through Petrie's publications, either in the tomb's descriptions however brief in the 1896 monograph (see above 2.1—one spectacular such case is that of tomb 1247, a very rich one for which, nonetheless, almost no object had made its way into the museum collections) or by mentions of tomb numbers next to specific artifact types in the plates or in the *Corpus of Prehistoric Pottery and Palettes*, testifying once more to the importance of fully exploiting the scattered data enclosed in these books.

Tomb 299 illustrates well what a thorough examination of all documents available can bring to our understanding of these 'lost tombs'. While it did not appear in E. Baumgartel's inventory because no artifact had been identified in museums, it actually contained not only three different types of ceramics according to the pottery list (at least one B35b, one P56b, and one D57), but also a fish-shaped palette, as is explicitly mentioned in one plate of the *Corpus* (Fig. 17). Although we cannot be certain of its shape given that the object has

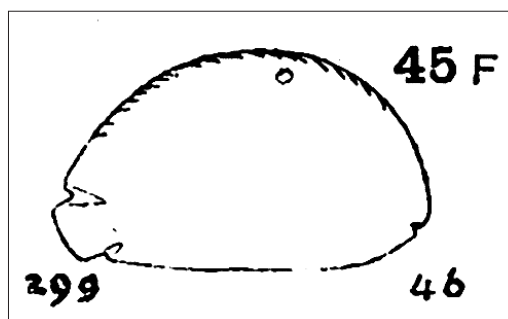


FIG. 17. Mention of a palette in tomb 299, hitherto unlocated in museums, in the *Corpus of Prehistoric Pottery and Palettes*, pl. LIV.45F (bottom left numbers indicate the tombs in which this type has been found).

⁶⁸ BAUMGARTEL (1970), *op. cit.*, p. XIII.

⁶⁹ HENDRICKX (1989), *op. cit.*, p. 328.

⁷⁰ *Ibid.*, *loc. cit.*

still not been relocated, it should be of type 45f according to the drawing provided, which is proposed to date to Naqada IIB/IIC,⁷¹ a dating consistent with the ceramic assemblage.

Several other tombs are in the same case, such as tomb 1008, for which not only a small ovoid D-ware jar is listed in the pottery inventory (although it remains unlocalized), but also a flint, signaled in the original publication's plates (pl. LXXIII.66), could be added to the record and therefore establish that this tomb was in fact not empty.

The necessity of exploiting all this data from the original publications⁷² and the fact that it is oftentimes extremely scattered is well illustrated by the case of tomb 1209. To the three artifacts relocated in museums (of which the two vases are indeed confirmed by the pottery list), we add one more ceramic type from the pottery list but also a fish-shaped palette appearing in the *Corpus* (pl. LIV.40h) and five 'syenite' (granite) marbles (as are known in several Naqada-period tombs and especially in that cemetery and believed to pertain to a game),⁷³ known only through a very brief mention in a thematic chapter of the original publication, away from the descriptions ordered by tomb number,⁷⁴ and which only a thorough reading and mining can uncover.

While many tombs were believed to be empty or with very few artifacts, the new pottery lists as well as information scattered in Petrie's publications have enabled us to complete the record and take into account every artifact originally present in a tomb, regardless of whether they were sent to museums after excavation - something the previous inventories could not do.

2.3. Case studies: Tombs with revised dating

Nader EL-HASSANIN

The addition of so many new items, and especially pottery types, within each tomb's assemblage allows for a reexamination of their datation. While, in many cases, our work confirms the dates suggested by S. Hendrickx in his study combining the range of attestation of artifacts known to him and the position of the tomb within the cemetery's spatial development (see section 3), it also allows to propose a date for a large number of tombs which could previously not be dated, and to reassign some of them to a more coherent dating after sorting out their exact contents.

Indeed, within the corpus presented in this article, 254 tombs which could not be dated in S. Hendrickx's study (owing to a lack of known pottery types and other *fossiles directeurs*) now find a proposed chronological range—however loosely defined, in some cases where only a *terminus post* and *ante quem* can be achieved. 182 tombs remain undated (and an additional

⁷¹ C. REGNER (1996), *op. cit.*; called type C2 in the simplified typology presented in Brémont, "Question de mode ou nécessité symbolique ? À propos du développement des palettes à fard en forme de poisson", *Égypte. Afrique & Orient* 90, 2018, pp. 25–36.

⁷² It is nevertheless important to note that, in some cases, the original publication does not appear to be entirely error-free. For instance, for tomb 474, a pot now in the Ashmolean Museum was rightfully deleted by J. Crowfoot Payne (1987, p. 185) and is indeed from Ballas as clearly depicted in notebook 145, despite being labeled in the original publication (PETRIE, QUIBELL [1896], *op. cit.*, pl. LIV.227) as coming from tomb 474, without the normal "Q" prefix signaling tombs from Ballas.

⁷³ Especially tombs 100 or Ballas 711 for the most complete 'sets', see PETRIE, QUIBELL (1896), *op. cit.*, p. 14, pl. VII.

⁷⁴ PETRIE, QUIBELL (1896), *op. cit.*, p. 35: "Similar games appear to have been placed in other graves [...]. Syenite balls were found in 1209 (5), in 1246 (2), in 1239 and in 472."

37 with conflicted evidence or unprecise dating, see 2.4), which brings the total of undated tombs for this particular sample from almost 57% previously to less than 30% (not counting the tombs for which all information is lost, cf. Fig. 2).

Several previously undated tombs thus now have finely attested dating thanks to pottery lists. Tombs 635, 637 and 640, all previously thought to be empty (see 2.2), have been dated respectively to Naqada IIC, IIB and IIC after the inclusion of vases mentioned in the pottery list as published by A. Stevenson (including one relocated in museums by T. Kuronuma and matching the pottery list, providing stronger evidence). The same goes for tombs such as 1215, with no previously known ceramic contents and which now include a comfortable assemblage of six pottery types to help define a rather accurate dating of Naqada IID.

Among these newly dated tombs, those containing D-wares (e.g., tombs 412, 629, 691, 1047) pose challenges in pinpointing precise chronological placement but can at least be placed within the broad temporal context of Naqada IIB to IIIA₁ maximum. Despite incomplete documentation, the mention of D-ware vases in the pottery list for tombs like 412, 629, 691 or 1047 situates them within the Naqada IIB to IIIA₁ period. A more unique case is perhaps exemplified by tomb 840, where the identification of a rich assemblage of five different types thanks to the pottery list might provide a more precise date for the tomb and its two D-wares. Indeed, the tomb includes, according to the pottery list, a roughly made Rough-ware conical cup (R6), which, according to S. Hendrickx, is dated in all three of its other attestations to Naqada IIB-IIC, and which therefore may point to a more specific, early phase of the production of D-wares.

Other tombs have seen their dating completely reworked in the light of the new evidence, particularly stemming from the pottery lists. This, of course, especially affects tombs where objects from Ballas had been mixed within the Naqada assemblage and wrongly taken into account in their dating, such as tomb 396. After comparing both the Naqada and Ballas pottery lists, it appears that two of the three vases E. Baumgartel had located as pertaining to this tomb match, in fact, the Ballas pottery list (types B75b and P76), while in turn the Naqada tomb included a R34b type unlocated in the museum sample but known from the pottery list. As a result, the dating of this tomb is now revised from IC-IIB to a clear Naqada IIC. Another, striking example, tomb 430 was thought to hold a R36 and a L39, both of which pointed to a very late, Naqada IIIB date, but they both turned out to be from Ballas when examining pottery list and notebook evidence. Instead, the tomb contained types B39a, P57a and D67, all of which clearly reattributed it to the much earlier Naqada IIC-IID horizon. This new date also fits much better the other, neighboring tombs, and contributes to a better reconstruction of the areal development of the cemetery (see section 3). Finally, a less certain, but likely, case is that of tomb 138, proposed to be dated to Naqada IIIA₁ by S. Hendrickx based on the fact that it was thought to contain a B74 and a D66 vases—but for which the pottery list only confirms the presence of a B47 vase, thus shifting it to a Naqada IC-IIC horizon. There is no doubt that the second phase of the project, where the notebook data will also be taken into account, will help discriminate even better between objects from Naqada and from Ballas for the remaining tombs.

While the reattribution of objects from Naqada to Ballas tombs accounts for a lot of the instances of revised dating, it is not the sole factor. Simply adding the new evidence from pottery lists has allowed for the fine-tuning of dating in tombs such as 1208 and 1396. In tomb 1208,

the inclusion of new pottery types like B11f and B79a has led to a revised dating from IID to a broader range encompassing IIB-IIC. Similarly, in tomb 1396, the presence of pottery types P93b and P98a, as indicated in the pottery list, alongside other artifacts, has refined the dating from IIB to a later range of IID. Finally, in the example of tomb 584, a context previously proposed to be dated to Naqada IIIA1 (despite only known to contain R81, a conical jar widely attested throughout Naqada II), the inclusion of types B35d, B37a, P22 and P23a from the pottery list clearly indicates that it should be reattributed to the IIC period instead.

In addition, in some tombs, ceramics have been attributed to a better-fitting type than suggested by E. Baumgartel, impacting the chronological range that was proposed for the tomb. For instance, the direct examination of objects in tomb 1532 led to reattributing the vase identified by E. Baumgartel as a B56 (Chicago Oriental Institute inv. no. E832) rather to a B79 shape (see 1.3), which was indeed what Petrie had indicated in the pottery list. As a result, the dating of tomb 1532 has to be slightly shifted from IIA-IIC to a revised range of IC-IIB. The pottery list data, as well as direct examination of ceramics in order to ascertain the type listed, has contributed to a more accurate understanding of the chronological position of these tombs.

One particularly striking result is that several tombs that were thought to date to the very first phases of the Naqada period (IA-IC) actually need to be attributed to much later phases according to the new evidence preserved in the pottery list. In tomb 1022, which was initially dated by S. Hendrickx to the IC period (from the only attested vase in E. Baumgartel's inventory, a P11c bowl, and his reconstructed spatial development of the cemetery), the discovery of a D-ware vase (D10c) and large Red-polished jar (P40e, whose chronological range should span from Naqada IIA to IID) listed in the pottery inventory shifts its chronological range to a much later period, with a *terminus post quem* of Naqada IIB at the earliest. Similarly, tomb 1024's dating has undergone a substantial revision, transitioning from its original IA classification to a later and more extensive timeframe spanning from IIC to IID. This change follows the identification in the pottery list of a D-ware (D67c) and a small Red-polished flask (P95b), currently understood to exist only between IIC and IID, while the presence of a B22d/B24 jar, originally thought to pertain to the tomb, is in doubt given its absence of mention in the pottery list. Finally, in tomb 484, the reassessment of artifacts in light of the pottery list has brought into question the presence of the F17a shape originally identified. Instead, the inclusion of a R57c shape from the pottery list prompts a re-evaluation of the tomb's chronology, shifting its original classification to IID through IIIA2 instead of IC.

Finally, it should be noted that, in several cases, the expansion of the attested types in an assemblage has led us to propose a purposefully less restricted dating for the tomb. Indeed, S. Hendrickx's propositions were always restricted to only one subperiod (i.e., always 'IIC', never 'IIA-IIC'), building on ceramic evidence as well as his suggested chronological development for the cemetery. In some cases, however, the newly completed assemblage did not allow us to decide in favor of a particular subphase when all types had a relatively large span. This is the case, for example, for tomb 1340. Initially assigned to the Naqada IIIB period, the presence of newly recognized artifacts (a L33 and a R38 pottery types, in addition to the L12/L19 bowl already known since E. Baumgartel's inventory) suggests a much looser timeframe ranging from IID to potentially extending to IIIB. While the ceramic assemblage itself does not allow for a more restricted dating, the earliest phases would fit better the distribution of turtle-shaped palettes, one of which is also known to come from this tomb.

This nuanced understanding underscores the dynamic nature of archaeological interpretation, where the incorporation of new evidence can significantly alter our understanding of historical timelines and cultural contexts associated with these tombs.

2.4. Future avenues: 'Conflicting' assemblages and reassessing the chronological range of some ceramic types

Nancy ABDELAZIZ

Because the 'Main cemetery' is both still the biggest Naqada-culture cemetery known to date and one of the only ones that encompasses all phases of this culture,⁷⁵ it has been used in many of the seriation endeavors to understand the sequence and succession of pottery types to order them from Naqada I to Naqada III. However, because of all of the inaccuracies we have seen so far in the Naqada assemblages, including this somewhat unreliable data in the seriations has resulted in skewing the results and partly throwing off the dating for at least some of the types. This appears clearly when we consider some of the revised assemblages, which show that pottery types coexisted even while it was considered that they should not be able to overlap, at least with our current understanding of their chronological range.⁷⁶

Of course, the co-occurrence of pottery types with conflicted chronological ranges within the same tomb should first warn us against the possibility of tomb reuse and/or heirloom items. This might be the case for tomb 1206, which is described in the original publication as a huge tomb (3.5m length) with 'eighty-six' ceramic jars and 'body gone,'⁷⁷ which might even be indicative of specific deposition practices. Given both the wide collection of artifacts with various chronological ranges (the bulk extending to the IID period but at least one associated with IIB and two with IIC) and the very incomplete state of the documentation concerning this pit, we should refrain from drawing any conclusions from this tomb in a reevaluation effort or, indeed, any future seriation, since it is not possible to ascertain that they all pertain to one use-phase.

Another element we should be wary of before questioning the validity of our current chronological models is the possibility of errors, such as wrong type assessments, within the pottery list—which, as has been stated several times throughout this article, cannot always be taken at face value. In tomb 1486, for example, the mention of a L20 bowl is to be taken with extreme caution, both because it is at odds with all the rest of the assemblage (with a wide chronological gap) and because we have noted on several occasions miscategorizations within the pottery list between Red-polished and Late-ware bowls. The possible confusions between Naqada and Ballas also come into play once more: specifically, tomb 276 for instance should, according to the pottery list, contain a B25h type, which would bring its range of

⁷⁵ Compare, for example, with the Abydos cemetery of Umm el-Qaab, which, while very rich and extensive (659 tombs excavated), entailed rather few tombs of the Naqada IIC-IID phases (HARTMANN [2016], *op. cit.*, p. 338), while the Adaïma Western cemetery is mostly represented by tombs later than Naqada IC ("A Reconsideration of Predynastic Chronology: The Contribution of Adaïma," in R. Friedman, P. Fiske (eds.), *Egypt at its Origins 3*, *op. cit.*, pp. 939–950) and the important site of Nag' ed-Deir and its 635 tombs mostly date to the wide Naqada IIB-IID horizon (FRIEDMAN [1981], *op. cit.*, UCLA Berkeley).

⁷⁶ Based on the most consensually admitted proposals in HENDRICKX (1989), *op. cit.*

⁷⁷ PETRIE, QUIBELL (1896), *op. cit.*, p. 27.

attestation later than its original IC. However, the fact that the Ballas notebook mentions a B25 and the mention in the Naqada pottery list appears to be a later addition prompts us to be careful and not consider it as trustworthy enough evidence for the reconsideration of the type's chronology (see 1.3).

However, not all cases of conflicted assemblage have a dubious aspect such as these, nor can they all be explained by the possibility of tomb reuse. Our opinion is that at least some of the 37 cases identified in this corpus⁷⁸ should prompt us to reassess the chronological range of some ceramic types, especially when there is only one outlier in an otherwise coherent assemblage.

This new data can therefore, in some cases, help us adjust the chronological range for types which were not grasped well enough because of a scarce number of attestations, such as the Red-polished globular jars P3I. Previously known only by two examples in the entire Naqada-period corpus of tombs,⁷⁹ they were estimated to occur at the IID and IIIB periods. The evidence from tomb 1412 can contribute a new attestation, this time firmly dated between Naqada IC and IIB at the latest, given its association with early types such as B25h, F12 or B74c. The same applies to the Black-topped bottle B93b, so far known only by one attestation in S. Hendrickx's study, which, through its presence in tomb 1379, can now be proven to exist slightly earlier than previously thought, already in Naqada IIC (from its association with types B62b and B57b). These sometimes marginal adjustments based on new evidence are the reason why, in the Annex to this paper, many tombs are dated to a wider range rather than a precise phase; for instance, tomb 1336 is dated to IIB-IIC because it pairs a B37a (expected to commence only in IIC) with a B78c (expected to end in IIB).

One may argue that such problematic assemblages are all the more compelling when the outlier is supposedly later in date than the rest of the assemblage, eliminating the possibility of an heirloom item. Among them, we may cite the case of type L40. The association by S. Hendrickx of this large, elongated ovoid jar to the Naqada IIIA phase (seemingly quite unequivocally on the basis of six occurrences)⁸⁰ might now have to be challenged given the revised assemblages for tombs 1229 and 1233. Indeed, the first tomb was not originally thought to have contained type L40, but its presence is now attested through the pottery list, and therefore it has to have at least partially coexisted with types D5h, B38c and B57a—all only attested at the latest until Naqada IID (and possibly even only Naqada IIC for the third one). As for tomb 1233, even though the pottery list does not include the type (see 1.3), there were clearly L40 jars in the tomb, as mentioned explicitly in the tomb description in the 1896 publication;⁸¹ thus, it is now, in this case as well, attested together with types D14m, B39a, B53a and W25n, all attested until IID at the very latest. It is therefore likely, from the new evidence of these two tombs, that type L40 should now be considered to have appeared earlier than Naqada IIIA1, perhaps even as early as Naqada IIC.

⁷⁸ Tombs 276, 303, 337, 346, 456, 487, 599, 620, 689, 810, 1021, 1229, 1230, 1233, 1240, 1289, 1290, 1332, 1336, 1378, 1379, 1380, 1395, 1406, 1409, 1411, 1412, 1434, 1436, 1449, 1484, 1486, 1497, 1503, 1543. When there was one clear outlier, we highlight here the potential for reevaluation of the chronological range of this particular type, but the 'revised dating' of the tomb given in the Annex reflects the range of the rest of the assemblage. When the evidence was too scattered for a clear dating to emerge, the Annex categorizes this tomb as 'conflicted evidence' instead of proposing a dating.

⁷⁹ At the time of S. Hendrickx's research, defended in 1989: HENDRICKX (1989), *op. cit.*, p. 89.

⁸⁰ HENDRICKX (1989), *op. cit.*, p. 86.

⁸¹ "Later style, jars L.40" (PETRIE, QUIBELL [1896], *op. cit.*, p. 27).

It seems that a similar conclusion might be drawn for type L72. Already, tomb 599 had been left undated in S. Hendrickx's study because it associated this type, considered to appear no earlier than Naqada IIIA1, with a B47, supposed to disappear after Naqada IIC. The new assemblage confirms this discrepancy since the tomb is now known to have also contained a P22 and a R81—two common and not very diagnostic types, but still associated with periods before Naqada IIIA1 rather than later. This seems to present compelling evidence that one of these types, or perhaps both, need to be reevaluated to account for their co-presence.

Indeed, type B47 (a common ovoid Black-topped jar with rounded base seen as characteristic of the Naqada IC-IIC horizon) appeared in several incongruent assemblages, which might be a clue that its chronological range should be reassessed. Besides tomb 599, one may cite tomb 1332, where it appears together (according to the pottery list) with a W47 Wavy-handled jar which is supposed to appear at Naqada IID at the earliest, as well as tomb 1406, where it is attested jointly with another type of Wavy-handled jar (W51) which should not, according to current models, occur earlier than Naqada IIIA1. The newly reconstructed assemblages thus enable us to identify that either the range of type B47 extends later than previously thought, or that our understanding of the evolution of Wavy-handled jars can be improved, or both.

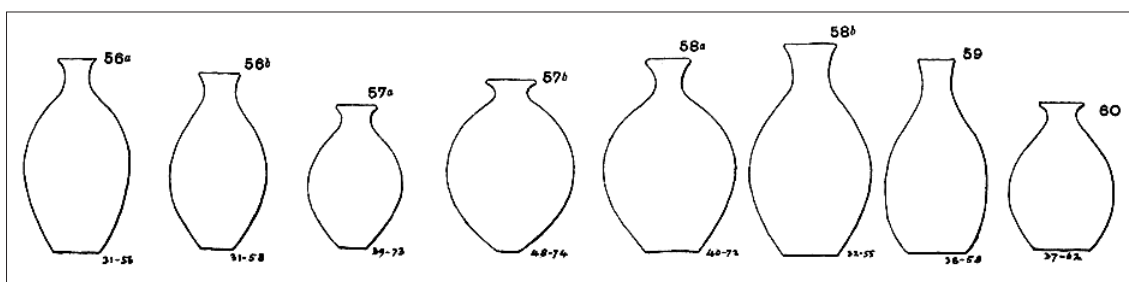


FIG. 18. Variability between all subtypes of ovoid Red-polished bottles with a narrower neck and everted rim (P56, P57, P58, P59 and P60) in Petrie's typology (after W.M.F. Petrie, *Corpus of Predynastic Pottery and Palettes*, London, 1921, pl. XII).

Tomb 1406 exhibits another recurring problem: its P58a bottle, a type which also occurs in another problematic assemblage, tomb 1484. In this case, it seems that categories P56, P57 and P58 (and subtypes) are inaccurately evaluated mostly because they are all ovoid bottles, with minor variations in the width of the belly or neck and height (Fig. 18). It has been noted for several decades that the typology proposed by Petrie needlessly multiplied the number of types,⁸² which are more akin to a presentation of the variety of the corpus than a thorough reflection on which variation is significant, especially chronologically, and which variation occurs within the boundaries of the type, especially in the context of handmade, small-scale, non-standardized productions. Moreover, when working with the pottery lists alone without the preserved artifact to check against it, there is no guarantee that the subtype assigned actually corresponds to the real shape of the object (see 1.3), and neither does relying on E. Baumgartel's descriptions without a direct examination of the artifact. The fact that, in S. Hendrickx's study, the various types of Red-polished ovoid bottles are assigned slightly different chronological

⁸² Most notably S. HENDRICKX, "The Relative Chronology of the Naqada Culture. Problems and Possibilities," in J. Spencer (ed.), *Aspects of Early Egypt*, London, 1996, pp. 36–65, esp. pp. 36–38, 44–45.

ranges (IC-IIB for P56a, but IIC-IIIA1 for P57a, for example) should not be taken to imply that they are strictly dated and that there is a clearly recognized evolution in their shape, but rather that pots of this general category have been very fluidly assigned to either of these types. The fact that the revised assemblages show chronological conflicts on several occasions, especially tombs 1021,⁸³ 1434⁸⁴ and 1484,⁸⁵ testifies that this unreliability at the level of subtype assignation has contributed to a misinterpretation of the chronological range of tombs and ceramic types. The same remark applies to the general category of large ovoid Red-polished jars subsumed under P40, for which the diversity of subtypes obscures the fact that there is currently no hard proof of a difference in chronological range.

Indeed, a misleading element of the current typo-chronological models is the fact that some subtypes seem to be narrowly dated and therefore constitute a good diagnostic tool to restrict the date of an assemblage, but are actually either not clearly distinguished from other similar types (such as type P58b as we have shown) or not attested enough to yield a statistically reliable date. Such is type P34c, which appears in three problematic assemblages of this sample. In S. Hendrickx's study, where it was only represented by two occurrences (one in Abydos tomb U-25 and the other in Naqada tomb 1540, the typing of which should actually be confirmed), it was proposed to be dated to Naqada IC-IIA. Yet, in tomb 620, it is associated with a Late-ware bowl L7b, appearing in Naqada IIC; in tomb 689, it is paired with a P40b—itself a misleadingly narrowly-dated type for the same reasons as the P56/57/58 series—and a R63 which is only attested starting from Naqada IIC; and in tomb 810, it occurs with a large assemblage which, too, cannot predate Naqada IIC (especially the three Wavy-handled jars). P34c was thus clearly a statistically poorly dated type in previous evidence before the rediscovery of the pottery list, and should now be adjusted in the light of the new findings, after which it may even be used as a *fossile directeur* for other assemblages since the rest of its attestations appear to form a tight dating cluster.

This is all the more problematic that it also happens for types which seem to be rather solidly dated given the number of attestations considered: for example, type P98a-b conical jars with a rolled rim (and a slight shoulder in the case of the latter) are both dated to the narrow Naqada IID period by a seemingly compelling 8 occurrences in the corpus studied by S. Hendrickx.⁸⁶ Yet, tombs 346 (dated to Naqada IC-IIB on the basis of several Black-topped pots and a Black-incised bowl) and 1378 (dated to Naqada IC-IIC, with an uncertain D-ware that may or may not have been part of the assemblage but does not appear in the pottery list) are now known to have contained this type of jar and thus compel us to envision that it must have existed at least since Naqada IIC, if not even earlier. This realization, in turn, might prompt us to reconsider the date given to other contexts containing this type of jar, such as Matmar tomb 3749 or el-Amrah tomb A117, for which the narrow date of IID stems exclusively from

⁸³ This tomb contains a bottle characterized as P57b, a type specifically expected to end after Naqada IIA, while all the rest of the assemblage (types B13a, B41 and P95b) points to a IIB or even IIC date.

⁸⁴ This tomb contains two bottles characterized as P57a and P58a, the first of which is proposed to be dated to Naqada IIC-IIIA2, while the rest of the assemblage includes two types considered to stop at IIB (B27f, B49).

⁸⁵ This tomb contains a bottle characterized as P58b, supposed to date to Naqada IC-IIA.

⁸⁶ HENDRICKX (1989), *op. cit.*, p. 92.

the fact that they contained a P98 jar, the rest of the assemblage being more widely dated to Naqada IIC-IID in both cases.⁸⁷

Finally, this problem especially affects some of the types traditionally associated with the earliest phases of the Naqada period—which, for various reasons, are still difficult to grasp, as has been underlined by many authors.⁸⁸ We have already noted, in section 2.3, that some of the tombs initially attributed to the Naqada I period needed to be re-dated in the light of the evidence from the pottery list, and especially the presence of D-ware vessels. Another important result of the present reevaluation is the fact that some ceramic types considered to be characteristic of these early phases are repeatedly found in the 'conflicted' assemblages examined in this section. Among them, tomb 1543 associates a B19b tronconical beaker, normally dated to only Naqada IB-IC, to an ovoid Black-topped jar (B72a) thought to only start being produced at Naqada IIA; of course, it is possible that it is rather type B72a which may be earlier than previously thought.

A more recurring problem is that of the B22 series—which is not helped by the fact that, just as for the P56/57/58 bottles, all its subtypes in Petrie's typology are tall cylindrical jars with flaring walls, with subtle variations in the rim and degree of opening, which makes it difficult to evaluate where a distinction between types is relevant. Moreover, even if we account for the widest possible range currently proposed for the whole B22 series (i.e., from Naqada IA to IC, with one 'outlier' B22j in IIC according to S. Hendrickx),⁸⁹ the type still conflicts with the rest of its assemblage in no less than three tombs in our sample. In tomb 1436, the B22 cylindrical jar is associated with no less than 9 other pottery types, all of which (except an outlier and an undated type)⁹⁰ point to the Naqada IIB-IIC horizon. In tomb 1411 as well, the presence of seven other pottery types⁹¹ offers a solid dating of the whole tomb to Naqada IIA-IIB, and it is therefore likely that the chronological range for B22c (and most probably P36b as well, currently associated to Naqada IID) will have to be reassessed in accordance. Finally, in tomb 1449, the existence of a D-ware, as mentioned in the pottery list, also suggests that the chronological range for this pot may need to be reconsidered.⁹² R. Hartmann has suggested that this general series of types (described as "slender conical and cylindrical types of beakers") as well as other types mentioned in this section, especially P58a, should perhaps be dated to an even earlier phase than the usual Naqada IA-IB horizon,⁹³ but in the light of this reevalu-

⁸⁷ Several years ago, Nathalie Buchez called attention to the fact that these subphases, and especially IID, were insufficiently differentiated in current typo-chronological tools, using the new material from el-Adaiima (BUCHEZ [2011], *op. cit.*).

⁸⁸ S. HENDRICKX, "The Chronology Workshop," in R. Friedman, P. Fiske (eds.), *Egypt at its Origins 3*, *op. cit.*, pp. 911–915, especially referencing the work of R. HARTMANN, "The Chronology of Naqada I Tombs in the Predynastic Cemetery U at Abydos," in R. Friedman, P. Fiske (eds.), *Egypt at its Origins 3*, *op. cit.*, 2011a, pp. 918–937, and R. HARTMANN, "Some Remarks on the Chronology of the Early Naqada Culture (Naqada I/Early Naqada II) in Upper Egypt," *Archéo-Nil* 21, 2011b, pp. 21–31.

⁸⁹ HENDRICKX (1989), *op. cit.*, p. 73.

⁹⁰ B35a (IC-IIB), B74a (IC-IID), B74c (IIA-IIB), F14 (IB-IIC), F15 (IC-IIC), P41 (IIC-IID), P46b (IID), R41 (IIB) and P45c (undated).

⁹¹ B11c (IC-IIB), B57b (IB-IIC), P36a (IIB), P47a (IIB-IIC), P54 (IIA-IIC) and P36b (IID, outlier). Not counting the three atypical pots, see 1.3, and one undated vase.

⁹² On the one hand, B16 (IC), B22a ('IB-IC'), B25a or h (IC-IIB), B26a (IA-IC), B27d (IB-IIA), B92b (IC) and two C-wares, and on the other hand, B23a ('IIC', but see *infra*), F85 (IC-IID) and a D-ware.

⁹³ HARTMANN (2011a, 2011b), *op. cit.*

ation of the Naqada assemblages as well as other clues,⁹⁴ it seems to us on the contrary that they may be best shifted to at least Naqada IIA.

On the other hand, type B23a (a small, slender cylindrical jar with a flared rim), despite being associated with Naqada IIC in S. Hendrickx's study, should actually be considered among the earliest types of the Naqada period. Indeed, it appears both in tomb 1503 and in tomb 1497 with types dated mostly to before Naqada IIA.⁹⁵ The previous, mistaken dating to Naqada IIC actually stems from only one attestation in S. Hendrickx's corpus—tomb 431, where, as a matter of fact, the B23a should be reassigned to Ballas (as per notebook information). In this case, the revised assemblages allow us to identify a new ceramic type associated with the earliest phases of the culture, which are still among the most challenging to grasp.

Beyond what might appear to be a minor debate addressed only to ceramic specialists, what these conflicted assemblages—36 in this article's sample alone—indicate is that there are incoherences and errors in our dating models that can now be addressed with a better set of data and, hopefully, corrected. They cannot be solved in the current state of research, nor is an article such as this one the appropriate place for doing so, but eventually, once the entire database is completed, we hope to be able to rerun seriations, not from the unfortunately inaccurate data which had to be used in previous attempts,⁹⁶ but using this new set of more dependable information.

3. A NEW LOOK AT THE CEMETERY MAP. PROPOSING A GIS BY CHRONOLOGICAL RANGE FOR THE REASSESSED TOMBS

Wafaa HAMZA

The handwritten map published by Petrie in the original monograph and republished by E. Baumgartel presents several well-known problems, not least of which many missing numbers as well as several duplicates (Fig. 19). The rendering of topographical features, too, is not explained through a key or caption and no scale is included, which makes the plotting of this sketched map onto current or even less recent satellite views extremely difficult.

The map we present in this section is a digitized and corrected version, based on a cross-checking of the occurrence of numbers and their handwriting and complemented by the sketch maps found in two of the notebooks for parts of the cemetery.⁹⁷ With this additional data, most apparent duplicates and dubious readings have been sorted, with a few exceptions such as the 1291 duplicate, signaled in red.

⁹⁴ In particular in terms of iconographic repertoire: cf. A. BRÉMONT, *L'envers du décor. Perspectives archéologiques et anthropologiques sur l'iconographie animale nagadienne (ca. 3800-3100 av. J.-C.)*. Production, consommation, représentations, unpublished PhD thesis, Sorbonne Université, 2021.

⁹⁵ 1503: B22c (IC), B27b (IB-IC), B79b (IIA); 1497: B22a (IB-IC), B25c (IB-IC), B26a (IA-IC), F68c (IC-IIA).

⁹⁶ E.g., HENDRICKX (1989), *op. cit.*

⁹⁷ Notebook 70, p. 028; notebook 72, pp. 034, 056–057, 076, 084–085, 095, 100, 101–102, 103. A simultaneous endeavour by another researcher using the same additional sources has probably reached the same outcome: X. DROUX, "Revisiting Petrie's Excavations at Naqada: Cross-matching the Available Documentary Evidence and New Digital Map," *IntEg* 3/1, 2024, pp. 1–59, but the resulting map is not published.

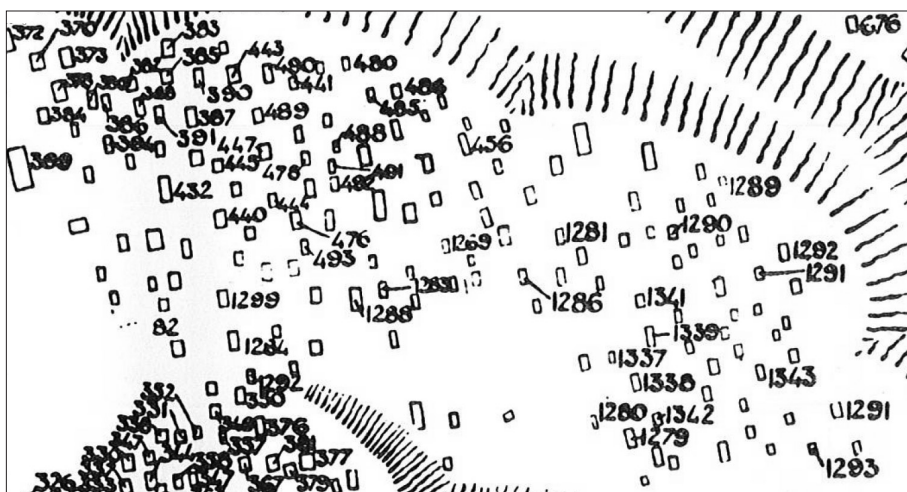


FIG. 19. Detail of Petrie's plan of the Naqada Main Cemetery (as published by E. Baumgartel after W.M.F. Petrie, J. Quibell, *Naqada and Ballas*, London, 1896, pl. LXXXVI. Scale 1:1500), showing the issues mentioned in the previous section. Note the duplication of number 1291, on the right side.

Building on this updated version of the map and the revised tomb assemblages presented in this paper, we were able to propose a chronological attribution (sometimes just consisting of a *terminus post quem*) for 555 of the tombs discussed in the article, most of which appear on the map. Fig. 20 represents the plotting of these revised dating hypotheses on the cemetery map.

Of course, it is still a work in progress and shall be completed, upon finishing phase 2 of the project, with the revised data from tombs whose notebook sketch and data are still preserved (in black outline in Fig. 20). Moreover, many tombs could not be dated to a single, narrow subphase (see 2.3) and, because the precision of the dating varied widely, it has been decided to group tombs according to wider 'Horizons', which also correspond to substantial changes in the material culture and practices: IA-IC, IC-IIC, IIC-IID and, finally, IIIA₁ and later.⁹⁸

This updated proposal nevertheless so far mostly confirms S. Hendrickx's earlier analyses on the general development of the Main Cemetery.⁹⁹ Most of the earliest, Naqada IA-IC horizon recognizable so far concentrates, for the Western sector, in the southeast part, and for the Eastern sector, in the north and northeast, in the 1400 and 1500s. In the current state of research (bearing in mind that these results are applicable only for the first sample of tombs examined in this paper), we recognize two to three 'primordial' clusters of development for the cemetery.

⁹⁸ These horizons can be perceived in some of the pottery development 'trends' but also in the existence or peak of 'popularity' of some specific categories of material (e.g., engravings on pots or 'Fancy' shapes in the IC-IIC general period, D-ware pottery and stone vases in the IIC-IID period, rectangular palettes in the IIIA₁ horizon), and also echo some specific habits in visual culture, especially the morphotypes of animal but also boat depictions, cf. BRÉMONT (2021), *op. cit.*; D. VANHULLE, *Le bateau pré- et protodynastique dans l'iconographie et l'archéologie égyptiennes. Pour une étude analytique et sémiologique de la navigation au 4^e millénaire av. J.-C.*, unpublished PhD thesis, Université Libre de Bruxelles, 2016.

⁹⁹ HENDRICKX (1989), *op. cit.*, pp. 318–372.

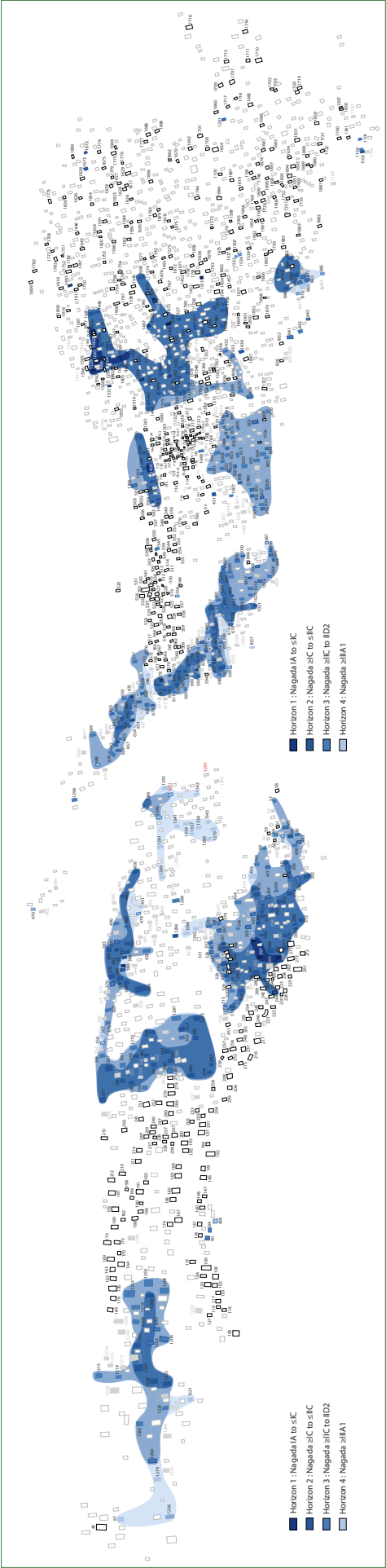


FIG. 20

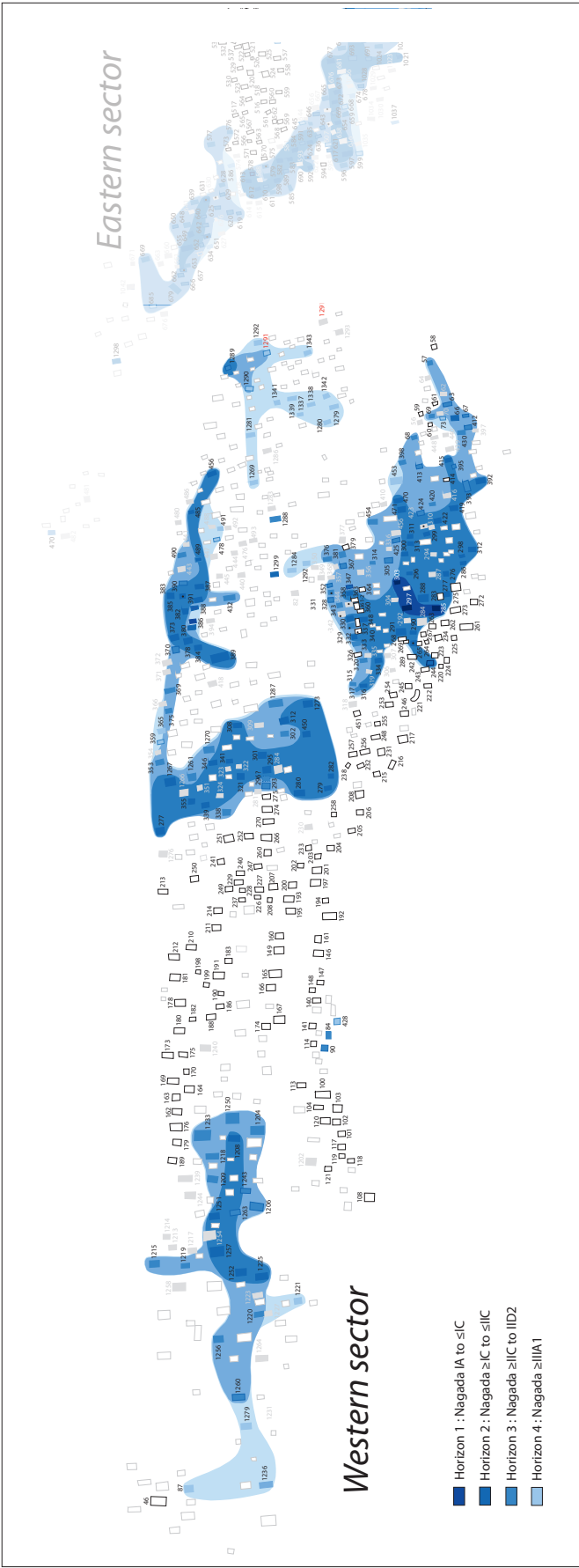
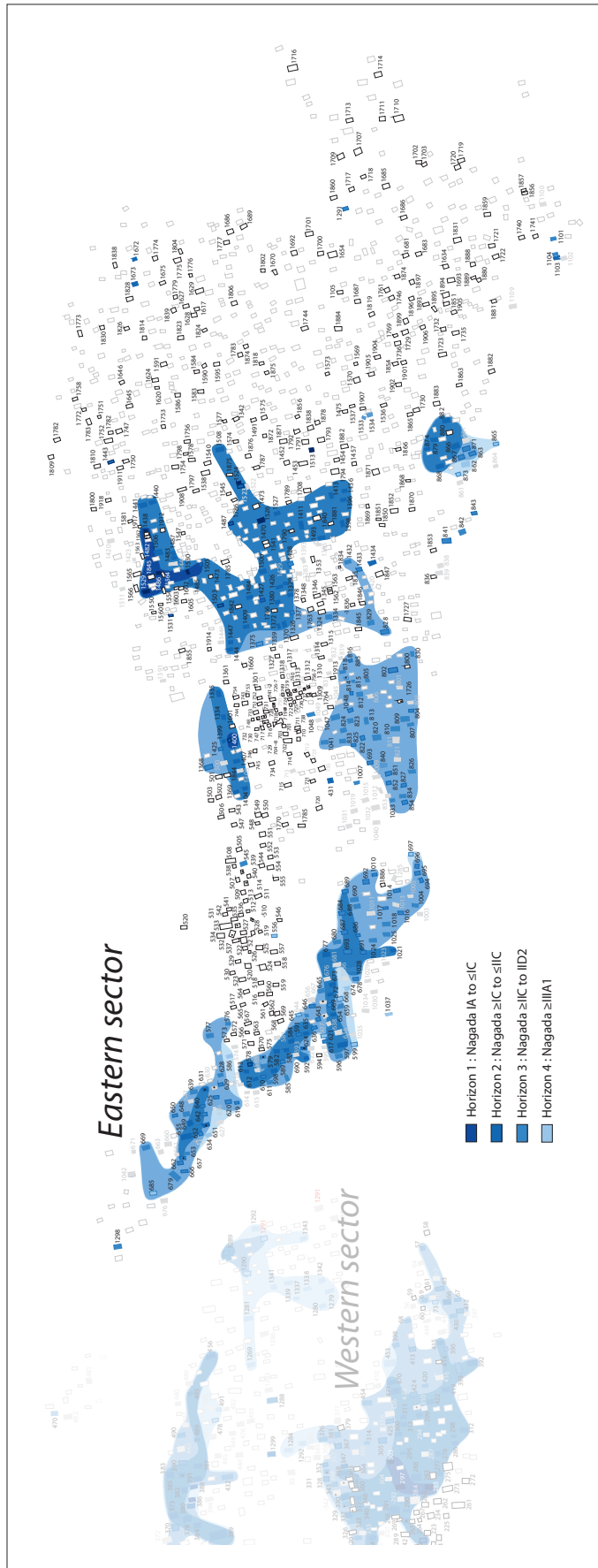


FIG. 20a. Digitized map of the Naqada Main Cemetery (with augmentations and corrections from notebook data), Western part, color-coded by chronological horizon. Gray represents undated w(or too loosely dated) tombs, black outline represents tombs to be added after phase 2.



20b. Digitized map of the Naqada Main Cemetery (with augmentations and corrections from notebook data), Eastern part, color-coded by chronological horizon. Gray represents undated (or too loosely dated) tombs, black outline represents tombs to be added after phase 2.

The Western cluster thereafter (between Naqada IC and IIC, which represents our second general horizon) developed towards the northwest, as well as slightly less in the southeast direction, while a new cluster (which will perhaps turn out to be connected to the first one when the analysis of all tombs is over) starts growing in the westernmost area of the wadi (Fig. 20a). On the other hand, in the Eastern sector, the necropolis primarily extended southwards (most probably, if Petrie's map is to be read in this sense, because of topographical obstacles immediately north of where the first cluster had been installed) as well as westwards, to a lesser extent (Fig. 20b). A second cluster, perhaps connected to the first one depending on the dating which phase 2 will assign to tombs in the 500s, also starts developing along the western edge of this eastern sector.

Interestingly, many of the tombs of the next period (IIC-IID horizon) then seem to develop peripherally to these original clusters of tombs, growing as an outer circle rather than in new directions, with the exception of a wide area in the sector of the 800s (southern edge of the western half of the Eastern sector), which overwhelmingly pertain to this phase and seem to be extending southwest from the original, central cluster of tombs underlined above. Finally, tombs of Naqada IIIA₁ and later are much less common, forming isolated additions in the margins of slightly earlier tombs (e.g., tombs 586, 668, 634 in the Eastern sector) or extending in a peripheral manner in three dispersed groups in the Western sector, with the exception of the large Protodynastic area on the eastern edge of the Western sector formed by tombs 1269-1343, which represents the only large cluster of this period recognized so far (and already identified in S. Hendrickx's study).

Some of the elements highlighted in section 2.5 are here, in our opinion, confirmed: indeed, the fact that an extremely high number of graves clusters around the Naqada IIC period may be taken as highlighting the need for a fine-tuning of parts of our ceramic chronological models, since roughly 'middle' periods are clearly overrepresented. This is, in part, why this phase was chosen as a turning point, being included in Horizon 2 if paired with earlier phases (e.g., a tomb dated IIA-IIC such as tomb 295) and in Horizon 3 if found paired with later phases (e.g., a tomb dated IIC-IID such as tomb 302). Although imbalances between various phases of the cemetery are to be expected from relative differences in duration, random demographic changes, development of other cemetery zones (e.g., the importance of cemetery T in the Naqada III period, which indubitably diverted graves of this period away from the 'Main Cemetery') and the unpredictable hazards of plundering, this specific overrepresentation of the IIC horizon is likely to stem directly from imperfections in the typo chronological system.

Despite these precautions, the maps in Fig. 20 and the very basic horizontal spread model which can be extrapolated from them (pending the addition of the results of phase 2) seem coherent¹⁰⁰ and most of the new or revised datings proposed in the course of this paper actually make some of S. Hendrickx's outliers more congruent with the proposed development of the cemetery and the chronology of nearby tombs. Such is the case of tomb 430 (already seen in 2.3),

¹⁰⁰ On the other hand, the reconstruction recently proposed by J. van Wetering is unfortunately based on unrevised data taken directly from Baumgartel's inventory and appear more speculative, especially since the maps show highlighted tombs which do not seem to present a lot of clustering but appear rather isolated (J. VAN WETERING, "The Cemeteries of Nubt: An Intricate Funerary Landscape of the Fourth Millennium BC," in A. Stevenson, J. van Wetering (eds.), *The Many Histories of Naqada: Archaeology and Heritage in an Upper Egyptian Region*, London, 2021, pp. 92-119).

which was thought by S. Hendrickx to date to Naqada IIIB due to mixups with Ballas material, but is now redated to Naqada IIC-IIID, a dating which closely fits neighboring graves such as 412, 67 or 395 (Fig. 20a). We hope that including the remaining tombs to this preliminary map and solving the inaccuracies in the typo-chronological system will eventually allow for the production of a more rigorous understanding of the chronological development of the Main Cemetery.

CONCLUSION: THE ROAD AHEAD

Somewhat lyrically, we have called the 735 tombs discussed in this paper the “lost tombs,”¹⁰¹ because they were not represented in the notebooks and, for a large number of them, were thought to be empty or at least completely lost until the rediscovery of the pottery lists just a few years ago. But from the work conducted so far, it has appeared that the reasons why these tombs were “lost” to begin with are very diverse, from loose pages detached from the notebooks,¹⁰² to whole notebooks probably still missing, to field notes that may have never existed in the first place—in the case of tombs deemed too poor or too disturbed to be of scientific value—to, possibly, some tomb numbers having been attributed or saved for a specific area but never actually excavated.

While we have observed that the pottery lists were not always extremely reliable (and have felt compelled to report here extensively the problems encountered, to serve any other researcher to exploit this new material), they still enable us to correct the assemblages, sort between Naqada and Ballas artifacts to a better degree (although some artifacts still remain uncertain), and add a large number of previously unknown pottery types to each tomb’s record. Paired with the efforts by T. Kuronuma to gather a more comprehensive inventory of artifacts in museums from published catalogs, online databases and unpublished collections, an average of almost 2 new items per tomb have been added to the record (1243 in total) for the sample of 735 tombs examined here. They illustrate the importance of combining a thorough investigation of the museum collections, such as was initiated by E. Baumgartel, and an approach of the archival material that enables us to document unpreserved artifacts and find contexts, to avoid a strictly museum-centered perspective.

In turn, the preliminary results obtained so far underline the possible validity of soliciting new types of sources in our differentiation efforts. Specifically, the numbering system of museums could perhaps, in some cases (depending on the museum involved and their registration protocol as well as date on which the number was assigned), provide additional clues to discriminate between Naqada and Ballas. In tomb 598, for instance, the Ballas notebook enabled

¹⁰¹ Also as a playful reference to the involuntary re-excavation of tombs dug in 1899 by F.W. Green by the Hierakonpolis mission: S. DOUGHERTY, “The Lost Tombs of F.W. Green,” *Nekhen News* 15, 2003, pp. 24–25.

¹⁰² Some still preserved (as ‘notebook 135’) but some most probably lost. This seems especially likely for, e.g., tomb 57, for which notebooks were apparently present in Baumgartel’s time, as she transcribes them in her inventory.

J. Payne to attribute the palette inv. no. UC 4344 as well as the W19 pot inv. no. UC 4341 (relocated by E. Baumgartel) rather to Ballas tomb 599),¹⁰³ while our own research has also underlined that the R34 bowl inv.no. UC 4342 was probably also mentioned in the Ballas notebook. It is probably no coincidence that all three objects were sent to the same museum *and* labeled in numbers in close proximity to each other, and it begs the question whether the flint flake with inventory number UC 4343 should not also be considered as part of the same group and therefore from the same tomb. On the other hand, it must be acknowledged that this type of clue should be used with extreme caution, in particular because it is clear that, for the Petrie Museum at least, one and the same tomb has not always been provided with an uninterrupted series of inventory numbers (for example, objects inv. nos. 4459-4460, from tomb 147 as confirmed by the notebook, were inserted within the sequence of inv. nos. 4458-4466 allotted to tomb 1677).

The work accomplished on this first sample may seem to yield small results at the scale of each tomb; but overall, all of these changes put together actually have important repercussions, especially in our understanding of the pottery sequence of the Naqada period, since the contribution of this major site has so far been skewed by unreliable assemblage data, even in very recent endeavors to reform the whole typochronology such as R. Hartmann's study.¹⁰⁴ Eventually, we hope to be able to include the site in a new model of the pottery sequence of the Naqada period and make future research easier.

The database with revised assemblages, complete with a walkthrough of the choices and interpretations proposed, is intended to be made available online for researchers and the greater public. Collecting all of this data into a unified database is crucial as it allows for easy comparison and cross-referencing of data as well as collaboration, knowledge sharing, and broader dissemination to the public. As such, we consider this searchable database, the fixed state of research represented by the attached 'data paper' (Annex) and interim publications such as this one, as necessary and complementary products of the project.

Having now completed this first sample representing 38% of all tombs in the cemetery (reference number being 1918, even though there may have been more) and 48% of the tombs with some kind of documentation preserved, the team has now moved on to phase 2 of the project, which will tackle the digitization and transcription of plans and information contained in the notebooks, and the inventorying and cross-checking of the items included in those 788 remaining tombs.

¹⁰³ The latter also confirmed by the explicit labeling of its potmark as coming from tomb Q598 = Q[uibell], i.e., the site of Ballas, entrusted to him, in the original publication (PETRIE, QUIBELL [1896], *op. cit.*, p. LIV.221).

¹⁰⁴ HARTMANN (2016), *op. cit.*, includes data from Naqada taken verbatim from Baumgartel's inventory corrected by J. Crowfoot Payne and S. Hendrickx, without having the time to check type attributions against the objects or, indeed, having the possibility to include the pottery lists, which had not been uncovered yet at the time.

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