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Bart Vanthuyne

Reisner and Mace's Excavations of Naga ed-Deir Cemeteries N500-N900, N1500, N3000 and N3500 Reconsidered

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# Reisner and Mace's Excavations of Naga ed-Deir Cemeteries N500–N900, N1500, N3000 and N3500 Reconsidered

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BART VANTHUYNE\*

## ABSTRACT

Naga ed-Deir is located on the east side of the Nile, opposite Reqaqna, Beit Khallaf, and el-Mahasna, and about 20 kilometres north of Abydos. In 1901-1904 the Phoebe A. Hearst Egyptian Expedition, led by George A. Reisner, carried out extensive excavations in several cemeteries across the site, leading to the discovery of tombs from the Predynastic period up to the early Coptic period. Amongst these were cemeteries N500–N900, N1500, N3000 and N3500, for which Reisner and Arthur C. Mace identified the typo-chronological tomb development between the 1st and 4th Dynasty. A combined study of the tombs, burial customs and material culture, especially the pottery, found in these cemeteries, however, suggests that Reisner and Mace's dating and hence some of their conclusions are in need of revision, highlighting the need for a complete re-analysis of extant site data and museum objects.

**Keywords:** Naga ed-Deir, George A. Reisner, Arthur C. Mace, Early Dynastic period, early Old Kingdom, cemetery, tomb types, burial container types, pottery types.

## RÉSUMÉ

Naga ed-Deir est situé sur la rive est du Nil, en face de Reqaqna, Beit Khallaf et el-Mahasna, et à environ 20 kilomètres au nord d'Abydos. En 1901-1904, l'expédition égyptienne Phoebe A. Hearst, dirigée par George A. Reisner, a effectué des fouilles approfondies dans plusieurs

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cimetières du site, conduisant à la découverte de tombes de la période prédynastique jusqu'au début de la période copte. Parmi ceux-ci se trouvaient les cimetières N500-N900, N1500, N3000 et N3500, pour lesquels Reisner et Arthur C. Mace ont identifié le développement typo-chronologique des tombes entre la I<sup>re</sup> et la IV<sup>e</sup> dynastie. Une étude combinée des tombes, des coutumes funéraires et de la culture matérielle, en particulier la poterie, trouvée dans ces cimetières, suggère cependant que la datation de Reisner et Mace et, donc, certaines de leurs conclusions doivent être révisées, soulignant la nécessité d'un réexamen complet de données de site existantes et d'objets de musées.

**Mots-clés:** Naga ed-Deir, George A. Reisner, Arthur C. Mace, époque thinite, début de l'Ancien Empire, cimetière, types de tombes, types de conteneurs funéraires, types de céramique.



**I**N 1899 Mrs. Phoebe A. Hearst promised George A. Reisner five years of funding for an Egyptian expedition. Between 1899–1901 Reisner and his team conducted excavations at Coptos, Shurafa, Deir el-Ballas, Ballas and el-Ahaiwah. Reisner's attention shifted to Naga ed-Deir on February 1st 1901, after James E. Quibell, then Chief Inspector of Department of Antiquities, informed him it was being plundered. The site is located on the east side of the Nile, opposite the northern end of modern Girga, approximately ten kilometres south of el-Ahaiwah and twenty kilometres north of Abydos. In the course of the next three years, Reisner and his team would clear and document tombs in a series of cemeteries, dating from the Predynastic period up to the Coptic era.<sup>1</sup> Based on published and online Naga ed-Deir museum data, this article will re-examine the Early Dynastic and early Old Kingdom tombs, burial customs and material culture in cemeteries N500–N900, N1500 and N3000 excavated under supervision of Reisner,<sup>2</sup> and cemetery N3500 excavated under supervision of his assistant Arthur C. Mace,<sup>3</sup> as the dating and some of the conclusions proposed by the excavators are in need of revision, thereby highlighting the need for a complete re-analysis of extant site data and museum objects.

At first, Reisner and Mace's publications of the abovementioned Naga ed-Deir cemeteries were exemplary for their time, containing descriptions of tombs and objects found therein, and furthermore were also embellished with numerous photographs of the terrain, tombs, and objects. Cemetery dating was primarily done based on the typo-morphological evolution of tombs, but for comparative examples, at that time, Reisner and Mace depended largely on a limited number of publications, which e.g. for the 1st and 2nd Dynasty were mainly restricted to the area around Abydos.<sup>4</sup> The Naga ed-Deir tomb types were later further integrated

<sup>1</sup> REISNER 1901, pp. 24–25; REISNER 1904, pp. 105–109; REISNER 1908, pp. v–viii, 1–4; REISNER 1932, pp. 1–4; Reisner would continue intermittent fieldwork at Naga ed-Deir under the auspices of the joint Harvard University/Boston Museum of Fine Arts Expedition between 1905 and 1924. For an overview of the history of work at the site, see KROENKE 2010, pp. 14–16.

<sup>2</sup> REISNER 1908; REISNER 1932.

<sup>3</sup> MACE 1909.

<sup>4</sup> REISNER 1908, pp. 5–9, 126–138; MACE 1909, pp. 4–5, 14–18, 31–32; REISNER 1932, pp. 5–11.

into Reisner's seminal study on tomb development from the Predynastic period down to the accession of Khufu in the early 4th Dynasty.<sup>5</sup> While this study clearly outlines the trends in tomb development, the application of the many types and subtypes in the field has proved more difficult, and nowadays more basic tomb typologies are preferred.<sup>6</sup>



FIG. 1. Naga ed-Deir cemetery N500–N900, N1500, N3000, N3500 and N7000 (Google Earth image 08/06/2004).

Reisner and Mace's dating of Naga ed-Deir cemeteries N500–N900, N1500, N3000 and N3500 remains for a large part accepted.<sup>7</sup> However, one of their main drawbacks was that they were very reliant on the excavation results of Abydos. Beneficial was that this site contained all the royal tombs of the 1st Dynasty, but only the tombs of the last two kings of the 2nd Dynasty. Tomb data for the early to mid-2nd Dynasty was lacking. Moreover, the published pottery drawings rarely contained indications of the surface treatment that allows one to distinguish diagnostic vessels.<sup>8</sup> By the time Reisner and Mace started at Naga ed-Deir, their knowledge of Early Dynastic and early Old Kingdom pottery was rather limited, as will be outlined below. This in turn impacted their dating of the tombs in the cemeteries under discussion<sup>9</sup>.

<sup>5</sup> REISNER 1936.

<sup>6</sup> KÖHLER 2008, pp. 124–126; CLARK 2016, pp. 10–13; ALEXANIAN 2016, vol. I, pp. 2, 386–407.

<sup>7</sup> BAUD 2002, pp. 219–222; PODZORSKI 2008, pp. 89–102; CLARK 2016, pp. 507–521; ALEXANIAN 2016, vol. I, pp. 145–184.

<sup>8</sup> PETRIE 1900; PETRIE 1901; PETRIE 1902.

<sup>9</sup> The tombs under discussion can be dated either by using the relative Naqada chronology or the historical chronology (HENDRICKX 2006; HARTMANN 2016, vol. I, pp. 119–135). Modifications to the Naqada III C, III D and IV phases (Dynasties 1–4) (KÖHLER 2014; KÖHLER et al. 2017; KÖHLER et al. 2021) may lead to further fine-tuning of dates of Naga ed-Deir tombs in the future.

## THE EARLY DYNASTIC AND EARLY OLD KINGDOM NAGA ED-DEIR CEMETERIES

The Hearst Expedition found Early Dynastic and early Old Kingdom tombs in four cemeteries bordering three wadis northwest of the village of Naga ed-Deir (fig. 1). Earlier tombs were discovered in the main Predynastic cemetery N7000, which was used from Naqada IA up to Naqada IID2, with a few additional tombs tentatively dated to the early Naqada III period.<sup>10</sup> It is suggested that an unexcavated Late Predynastic cemetery bridging the gap between cemetery N7000 and N1500 was located further southeast of Naga ed-Deir,<sup>11</sup> though several Naqada III tombs were likewise discovered in cemeteries N1500 and N500–N900, as will be outlined below.

### CEMETERY N1500 AND CEMETERY N3000

Cemeteries N1500 and N3000 are more or less overlapping in time, and contained many disturbed burials. Reisner created a typology of tombs, which included graves with wood-roofed or corbel-vaulted mud brick substructures, with or without subdivisions, and with or without stairway or shaft, and recorded their chronological development. The use of stone was still limited in tomb architecture. In general, people were buried in a contracted position, on their left side, head to the local south, facing west. Combined, the two cemeteries contained at least ten burials in a wooden coffin, five in a rectangular or oval pottery coffin, and eight in a rectangular or oval mud coffin (figs. 2–3). By comparing the tomb architecture at Naga ed-Deir with that at Abydos and other sites in southern Egypt, Reisner dated almost all the tombs in cemeteries N1500 and N3000 between the middle of the 1st Dynasty and the end of the 2nd Dynasty.<sup>12</sup> Exceptions were e.g. the pottery coffin burials N1585 and N1640 or the stone slab-lined tombs N3003 and N3019, which he dated to the 3rd or 4th Dynasty, but this is unlikely to be correct.<sup>13</sup>

<sup>10</sup> LYTHGOE, DUNHAM 1965. For an overview, see HARTMANN 2016, vol. I, pp. 304–308, 334 (Abb. 150), 338 (Tab. 25); Tomb N7531 contained a late version of a cylindrical jar—type W85 (PETRIE 1921, pl. XXX)—datable to the Naqada IIIB period (The Phoebe A. Hearst Museum of Anthropology, hereafter PAHMA, object no. 6-4052).

<sup>11</sup> MACE 1909, p. I.

<sup>12</sup> Cemetery N1500 was assumed to contain mainly 1st Dynasty tombs, with a few early 2nd Dynasty graves, while cemetery N3000 was dated to the 2nd Dynasty (REISNER 1908).

<sup>13</sup> Tomb N1585 is a shallow grave with an oval pottery coffin, covered with limestone slabs, while tombs N3003 and N3019 had a stone slab lining. This is the common tomb type iv in cemetery N500–N900 (Tab. 2), and Reisner dated them to the early Old Kingdom. However, it will be shown below that this tomb type was already used in the preceding Early Dynastic period, so that these graves, and tomb N1523 (south) are most likely contemporary with the other tombs in the two cemeteries; Like N1585, tomb N1640 contained an oval pottery coffin, in a corbel-vaulted tomb, and it was dated to the 3rd Dynasty solely because oval coffins were common in cemetery N500–N900 (fig. 17). However, the corbel vault rather suggests that this grave too is contemporary with the other tombs in cemetery N1500, as are the small corbel vaulted tombs N1523 (north) and N1623 (REISNER 1908, pp. 7, II, 62–64, 85, 87, 89); Nicole Alexanian still dated the above listed tombs to 3rd–4th Dynasties (ALEXANIAN 2016, vol. I, pp. 145–146).

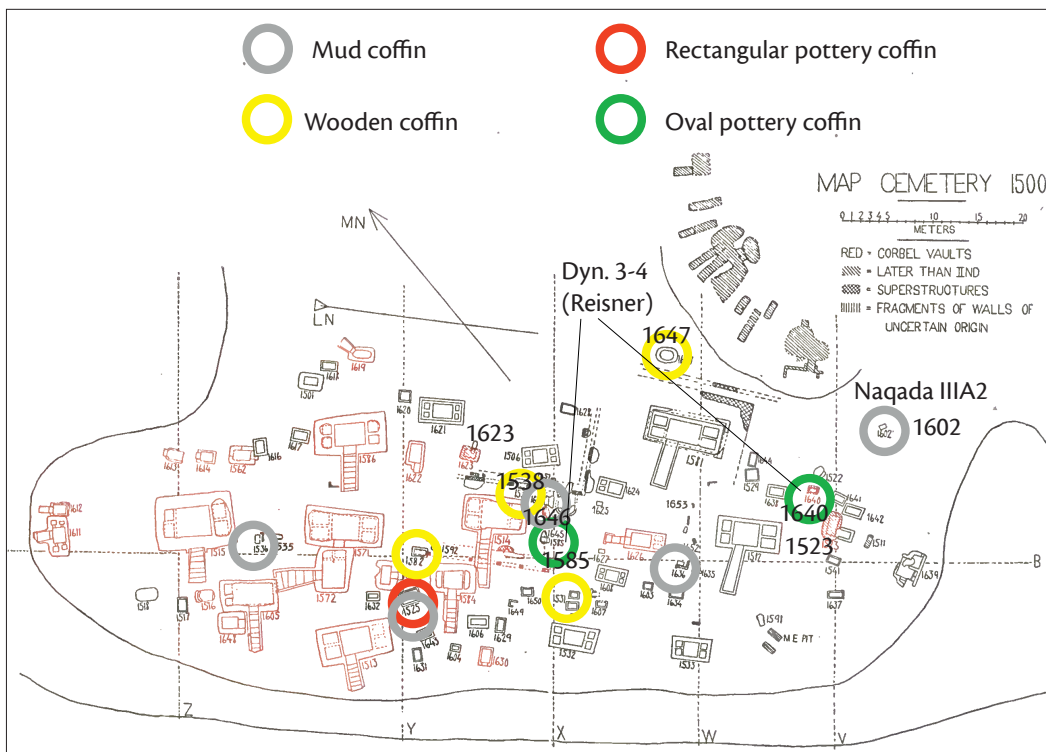


FIG. 2. Naga ed-Deir cemetery N1500.<sup>14</sup>

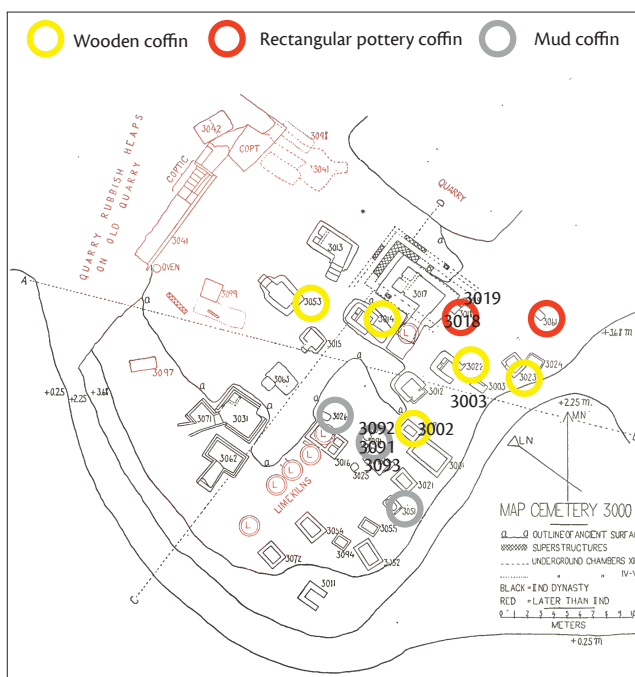


FIG. 3. Naga ed-Deir cemetery N3000.<sup>15</sup>

<sup>14</sup> REISNER 1908, pl. 76 – Map I.

<sup>15</sup> REISNER 1908, pl. 78 – Map III.

The pottery found amongst the tombs in the two Naga ed-Deir cemeteries under discussion suggests instead that they are mostly datable to the 1st Dynasty and the first half of the 2nd Dynasty.<sup>16</sup> One of the key diagnostic vessels for the 1st Dynasty are cylindrical jars, and only four were found in the two cemeteries,<sup>17</sup> which would lend support to Reisner's suggestion that the cemetery started around the mid-1st Dynasty, although an even later date in the dynasty could also be possible.<sup>18</sup> Some tombs are even older, as Hendrickx observed that one of the mud coffin burials (N1602), wedged between boulders, belonged to the Naqada IIIA2 period, because of the presence of a wavy-handled jar.<sup>19</sup> The same tomb also contained a beer jar with vertical scratches on the base (NEDI type V). Regarding this type of beer jar, Reisner states that they were present in every tomb type and almost in every tomb of cemeteries N1500 and N3000.<sup>20</sup> These jars correspond to Köhler and Smythe's "types 1 and 2" beer jars, which first appeared respectively in the Naqada IIIA/B and Naqada IIIB/C periods.<sup>21</sup> Also very common in both cemeteries were stroke-polished cups, bowls and plates (NEDI types XXIV–XXVI) (figs. 4–5). Vats with spout, with or without stroke-polishing, were likewise present (NEDI types XXII–XXIII), as were ring stands and low, wide bread moulds (NEDI types XXVIII–XXIX).<sup>22</sup> Key diagnostic pottery types from the late 2nd Dynasty to the early 4th Dynasty are, however, missing.<sup>23</sup> Absent were Köhler and Smythe's "type 4" beer jars with wavy surface and direct rim,<sup>24</sup> or *Kragenhals* beer jars. Neither were there any Maidum Bowls, bowls with an inner ledge rim, or high *bDA*-bread moulds with or without inner ledge rims.

<sup>16</sup> REISNER 1908, pp. 90–98—pottery types from the latter volume in this article are here referred to as NEDI types; On p. 93 footnote 3, Reisner states, "in passing, that [Naqada and Ballas types] L72, 74, 76, 78 [(PETRIE, QUIBELL 1896, pl. XLI)] form a group of characteristic 4th–5th Dynasty pots... So also [el-Amra type] L33g [(RANDALL-MACIVER, MACE, GRIFFITH 1902, pl. XIII)] is a characteristic 3rd Dynasty pot". From Ballas we know that the Naqada and Ballas types L72, L76 and L78 are already characteristic for the 2nd–4th Dynasties (VANTHUYNE 2022, pp. 242–244), and an el-Amra type L33g beer jar is more likely datable to the preceding Early Dynastic period, as tomb classes 4 and 6 containing them were dated to this period by the excavators (RANDALL-MACIVER, MACE, GRIFFITH 1902, pp. 10–13, 25–27; VANTHUYNE 2017b, vol. III, pp. 10–31–10–34). Moreover, on p. 93 Reisner also states that the (beer) jar of el-Amra type L33e (RANDALL-MACIVER, MACE, GRIFFITH 1902, pl. XIII; PETRIE 1921, pl. XLVII) is a prototype of a NEDI type IV storage jar, whereas the drawing of the el-Amra vessel suggests it is a *Kragenhals* beer jar, which is a key diagnostic vessel from the late 2nd Dynasty to the early 4th Dynasty (VANTHUYNE 2021). This indicates that Reisner was unaware of the ceramic development from the (late) 2nd to the early 4th Dynasty (Sneferu); following a review of the pottery of several tombs in cemetery N1500, Hendrickx also expressed his doubts about Reisner's dating (HENDRICKX 1989, vol. I, p. 353; HENDRICKX 1998, p. 122).

<sup>17</sup> REISNER 1908, p. 96 (fig. 177—types XVIII–XX).

<sup>18</sup> It remains to be determined how chronologically significant the presence or absence of the final versions of cylindrical jars are outside the Memphite region or Abydos; KÖHLER 2004, pp. 299–301 (fig. 2); SMYTHE 2008, pp. 157–159.

<sup>19</sup> REISNER 1908, pp. 17 (fig. 5), 96 (fig. 177—type XVIII), pl. 17c, 55a; PAHMA object no. 6-666: netted wavy-handled jar—type W62 (PETRIE 1921, pl. XXX); HENDRICKX 1989, vol. I, p. 353; HENDRICKX 1998, p. 122.

<sup>20</sup> REISNER 1908, pp. 17, 92–94.

<sup>21</sup> KÖHLER, SMYTHE 2004, p. 134 (fig. 2) (Helwan Operation 2); KÖHLER 2014, pp. 32, 37 (Helwan Operation 4).

<sup>22</sup> REISNER 1908, pp. 97–98.

<sup>23</sup> For an overview, see RAUE 1999; HARTMANN 2017, pp. 623–624 (figs. 7–8), 626 (fig. 9); VANTHUYNE 2017a; VANTHUYNE 2017b, 8-1–8-210; VANTHUYNE 2018a, pp. 99–102; VANTHUYNE 2018b; RAUE 2020.

<sup>24</sup> KÖHLER, SMYTHE 2004, p. 134 (fig. 2); KÖHLER 2014, pp. 32, 37.

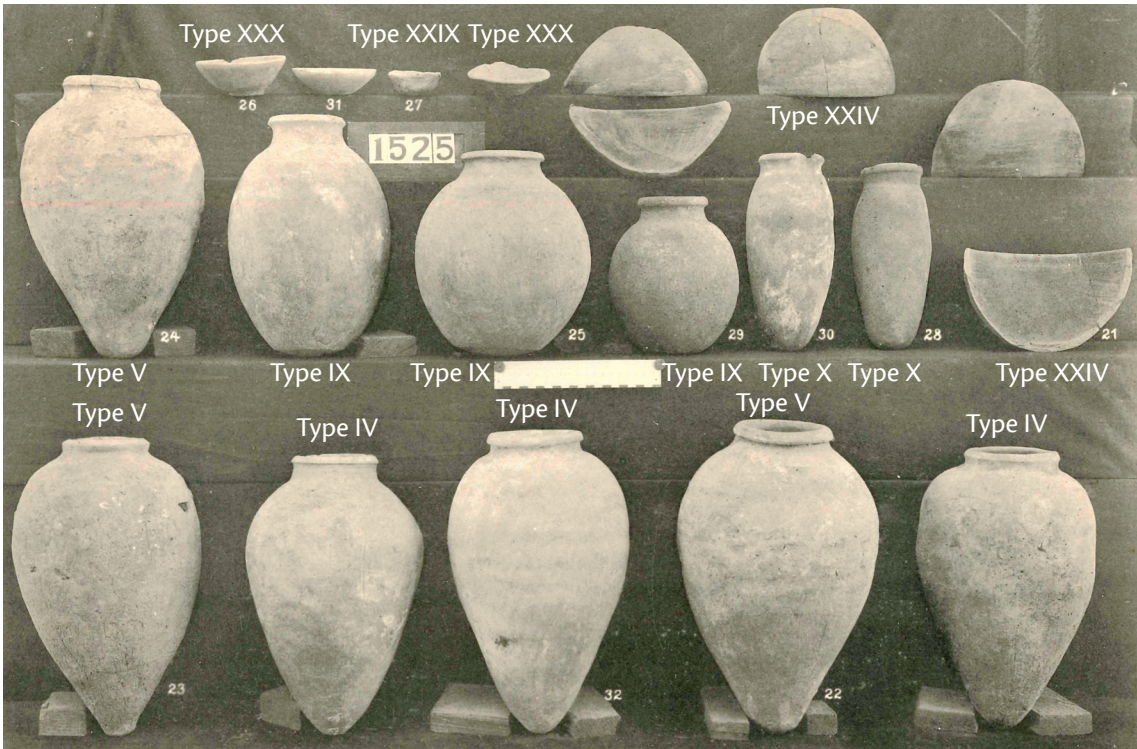


FIG. 4. Naga ed-Deir cemetery N1500—examples of pottery from tomb N1525.<sup>25</sup>

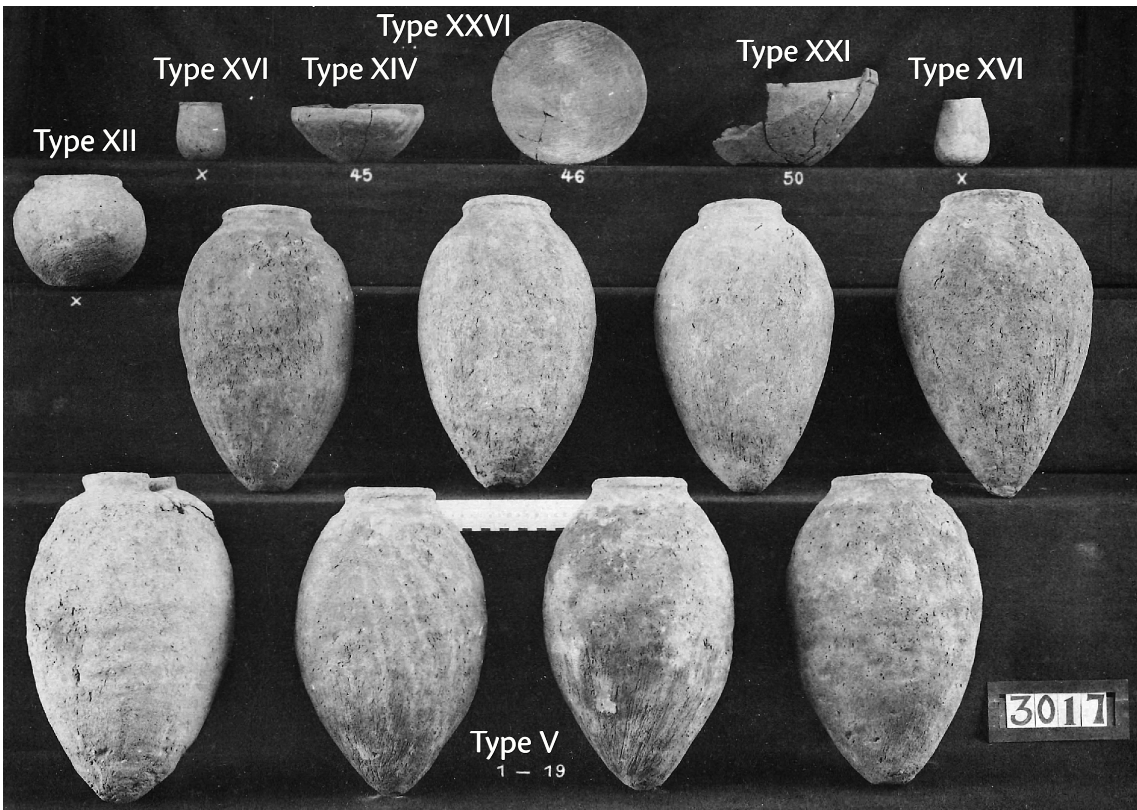


FIG. 5. Naga ed-Deir cemetery N3000—examples of pottery from tomb N3017.<sup>26</sup>

<sup>25</sup> REISNER 1908, pp. 20–21, pl. 54a.

<sup>26</sup> REISNER 1908, pp. 72–74, pl. 74b.

Part of the ceramic assemblage in both cemeteries is, however, e.g. comparable to that from the 1st–mid-2nd Dynasty settlement at Tell el-Fara'in/Buto,<sup>27</sup> or Elkab settlement Ceramic Series 2, which corresponds with the first half of the 2nd Dynasty.<sup>28</sup> The scratched beer jars are also comparable to those found in the late 1st Dynasty royal tomb of Qa'a,<sup>29</sup> and the 1st–early 2nd Dynasty tombs at Tell el-Farkha.<sup>30</sup> Moreover, at Helwan, tombs with internal subdivisions and/or with lateral access, comparable to those in figs. 2–3, were common in the 1st and early 2nd Dynasty, but were no longer made thereafter.<sup>31</sup> Near to Naga ed-Deir, on the opposite site of the Nile, similar contemporary tombs were likewise built at Mahasna,<sup>32</sup> Abydos<sup>33</sup> and el-Amra.<sup>34</sup>

### CEMETERY N3500

According to Mace, cemetery N3500 follows upon cemeteries N1500 and N3000, and contains tombs of the latter half of the 2nd Dynasty and the whole of the 3rd Dynasty.<sup>35</sup> Most of the about 150 tombs in this location were small, stone-roofed, filled-up graves, which derive from the older wooden-roofed graves. Mace identified four new groups of tombs (Tab. 1).<sup>36</sup>

Group A	Brick or stone-lined pit, covered with rough stones coated with mud. Tomb has a niched superstructure. Group can be subdivided into three types.
Type A1	Pit lined with mud brick or stone that was filled with sand and stones and covered with rough stones, which were plastered over with mud. It has a mud brick superstructure filled in with sand and stones, or rough stones alone. Platform with enclosure wall on west side. Burials in wooden or pottery coffin (fig. 7).
Type A2	Pit usually unlined, and usually filled and covered as in A1. It has a mud brick superstructure with niches. Platform with enclosure wall on west side. Burials in wooden or pottery coffin (fig. 8).
Type A3	Pit unlined, either filled and covered as in A1, or unfilled and roofed with a flat covering of mud bricks or small stones (resting on coffin?). It has a bricked niched superstructure, and a platform with enclosure wall on west side. Rough arching of stone or mud brick at top of superstructure wall. Burials in wooden coffins (fig. 9).
Group B	Pit lined with stone, filled with sand, and covered with three or four thin flakes of limestone (no illustration).
Group C	Pit lined with mud brick and roofed with three or four large dressed slabs of stone. Above slabs, a coating of mud. Under slabs, no pit filling. Mud brick superstructure with niches. Possibly burials in wooden coffins (fig. 10).
Group D	Unlined or stone-lined pit, usually filled with sand and small stones. Mud-plastered stone superstructure, with a flat or roughly-arched top (fig. 11).

Tab. 1. Cemetery N3500 tomb types A–D.

<sup>27</sup> HARTMANN 2017, pp. 615–621 (figs. 3–5).

<sup>28</sup> HENDRICKX et al. 2016, pp. 259–276.

<sup>29</sup> ENGEL 2017, pp. 132–147, 155–163.

<sup>30</sup> JUCHA 2009, pp. 49–60; JUCHA, MAĆZYŃSKA 2011, pp. 37 (tab. 2, nos. 27–29), 42.

<sup>31</sup> KÖHLER 2008, p. 125 (tab. 1); KÖHLER 2012, p. 283 (tab. 1).

<sup>32</sup> GARSTANG 1903, p. 28, pl. XXXIII—tombs M1+M2.

<sup>33</sup> HOSSEIN 2011; HUSSEIN 2016.

<sup>34</sup> RANDALL-MACIVER, MACE, GRIFFITH 1902, pp. 11–13, 28–30, 39, pl. IV (nos. 6–8).

<sup>35</sup> Cemetery N3500 is located NW of cemetery N3000 (fig. 1); MACE 1909.

<sup>36</sup> MACE 1909, pp. 14–31.

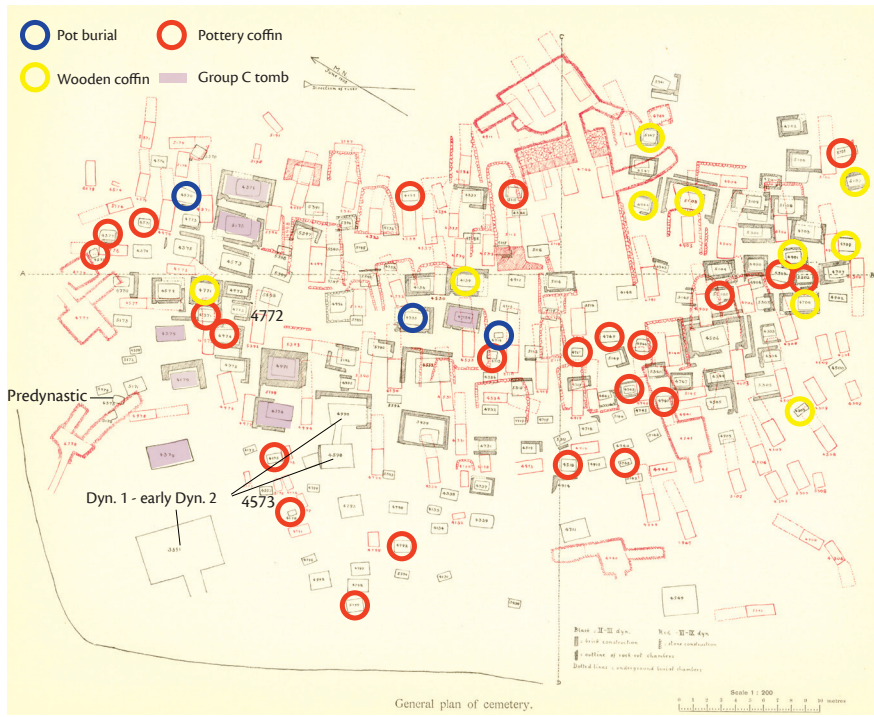


FIG. 6. Naga ed-Deir cemetery N3500.<sup>37</sup>

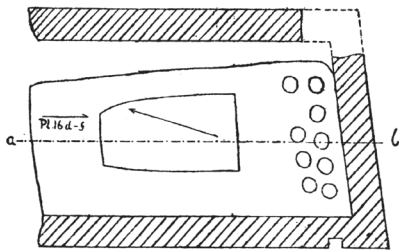


Fig. 53. N. 4573. Ground-plan. 1 : 50.

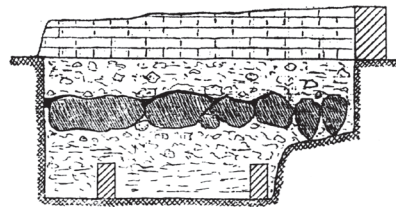


Fig. 54. Section a...b. 1 : 50.

FIG. 7. Cemetery N3500 type A1 tomb N4573.<sup>38</sup>

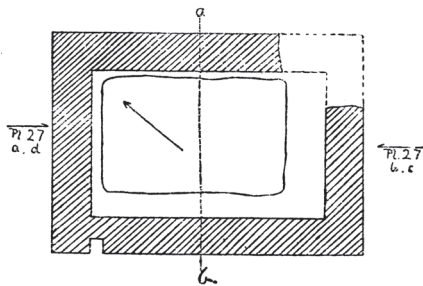


Fig. 65. N. 4702. Ground-plan. 1 : 50.

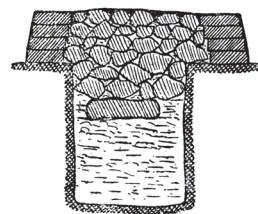


Fig. 66. Section a...b. 1 : 50.

FIG. 8. Cemetery N3500 type A2 tomb N4702.<sup>39</sup>

37 MACE 1909, pl. 58.

38 MACE 1909, p. 25 (figs. 53–54).

39 MACE 1909, p. 29 (figs. 65–66).

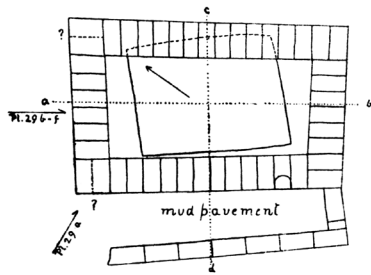


Fig. 67. N. 5104. Ground-plan. 1:50.

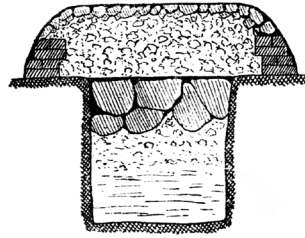


Fig. 68. Section a...b. 1:50.

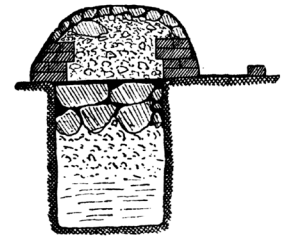


Fig. 69. Section c...d. 1:50.

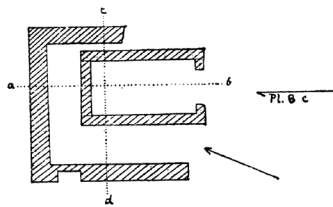
FIG. 9 Cemetery N3500 type A3 tomb N5104.<sup>40</sup>

Fig. 29. N. 4774. Ground-plan. 1:100.

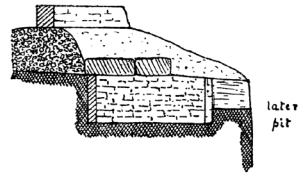


Fig. 30. Section a...b. 1:100.

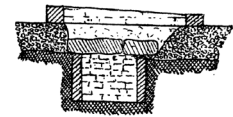


Fig. 31. Section c...d. 1:100.

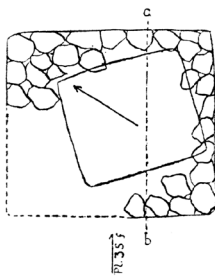
FIG. 10. Cemetery N3500 group C tomb N4774.<sup>41</sup>

Fig. 60. N. 4906. Ground-plan. 1:50.

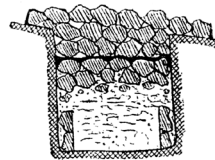


Fig. 61. Section a...b. 1:50.



Fig. 62. N. 4901. Section. 1:50.

FIG. 11. Cemetery N3500 group D tombs N4906 (left, centre) and N4901 (right).<sup>42</sup>

Five burials of tomb group C were covered with slabs of stone, which rested on a mud brick lining (fig. 10),<sup>43</sup> and Mace considered this to be the oldest of the new tomb groups in cemetery N3500, while tomb types A2 (fig. 8) and A3 (fig. 9) were the latest. Tomb type A1 (fig. 7) followed directly upon group C tombs, which lead to tombs of types A2 and A3. Tomb group B was later than tomb group C, and probably contemporary with tombs of type A1. Group D tombs (fig. 11) had all the characteristic of group A tombs, except for the superstructure.<sup>44</sup> The cemetery also contained one Predynastic tomb (N4373), and one large (N3551) and two small corbel-vaulted tombs (N4598, N4990) with stairways (fig. 6), comparable to graves in

<sup>40</sup> MACE 1909, p. 30 (figs. 67–69).

<sup>41</sup> MACE 1909, p. 20 (figs. 29–31).

<sup>42</sup> MACE 1909, p. 28 (figs. 60–62).

<sup>43</sup> Group C: tombs N4370, N4379, N4734, N4774, N5175, and possibly also tombs N4179, N4376 and N4991 (fig. 10) (MACE 1909, pp. 20–22).

<sup>44</sup> MACE 1909, p. 18.

the older cemeteries N1500 and N3000.<sup>45</sup> There were no tombs with underground chambers accessible by shaft or stairway, which were common in cemetery N500–N900.<sup>46</sup>

Mace's reasoning for dating the group A–D tombs to the late 2nd and 3rd Dynasties is rather simplistic. He assumes that the tombs with stone slab covering (group C) are later than the corbel-vaulted tombs in cemetery N3000, which he dated to the late 2nd Dynasty. In addition, the tombs with closed corbels from cemetery N500–N900, which Reisner dated to the 4th Dynasty (type v.a in Tab. 2), are absent from cemetery N3500. Mace also states that “none of the pottery found is of the well known IV dynasty type, while the graves themselves are so similar in motive that the whole series could only have covered a comparatively short space of time”. Consequently, he concluded that the group C tombs belonged to the latter half of the 2nd Dynasty, with the other tomb groups spanning the whole of the 3rd Dynasty, possibly into the beginning of the 4th Dynasty.<sup>47</sup> However, the recorded pottery in cemetery N3500 tells a different story, which is summarised briefly below.

Mace found the pottery in the tombs “singularly dull and uninteresting”.<sup>48</sup> More than 150 of the 170 excavated pots in the cemetery were beer jars. For the rest, it consisted mainly of small bowls and jars. Striking in this cemetery, compared to cemeteries N1500 and N3000, are the near complete absence of stroke-polished vessels, and the complete absence of bread moulds or ring stands.<sup>49</sup> Equally missing are several key diagnostic 3rd Dynasty vessel types, such as *Kragenbals* beer jars, Maidum Bowls, bowls with an inner ledge rim, or high *bDA*-bread moulds with or without inner ledge rims,<sup>50</sup> but Köhler and Smythe's “types 3 and 4” beer jars with wavy surface and modelled or direct rim, which first appear respectively in the Naqada IIIC/D and IIID periods, are present.<sup>51</sup>

<sup>45</sup> MACE 1909, pp. 18–20.

<sup>46</sup> These tomb types will be discussed in the section dealing with cemetery N500–N900.

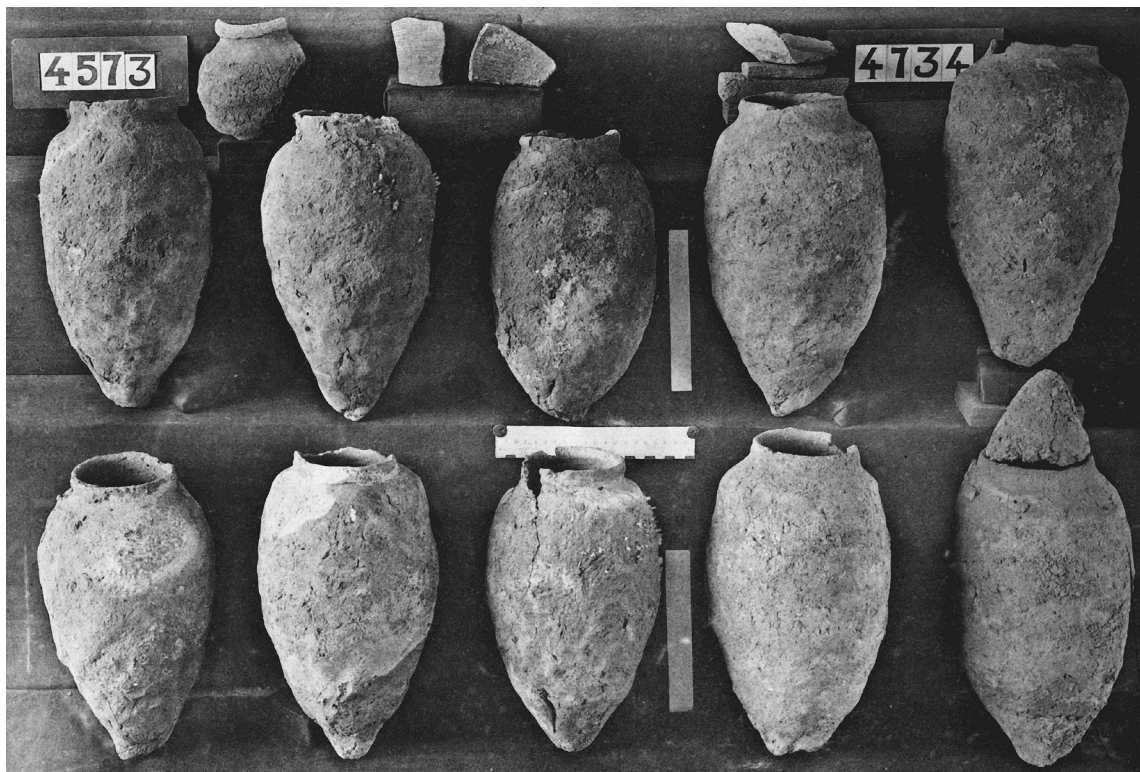
<sup>47</sup> MACE 1909, p. 18.

<sup>48</sup> MACE 1909, p. 37.

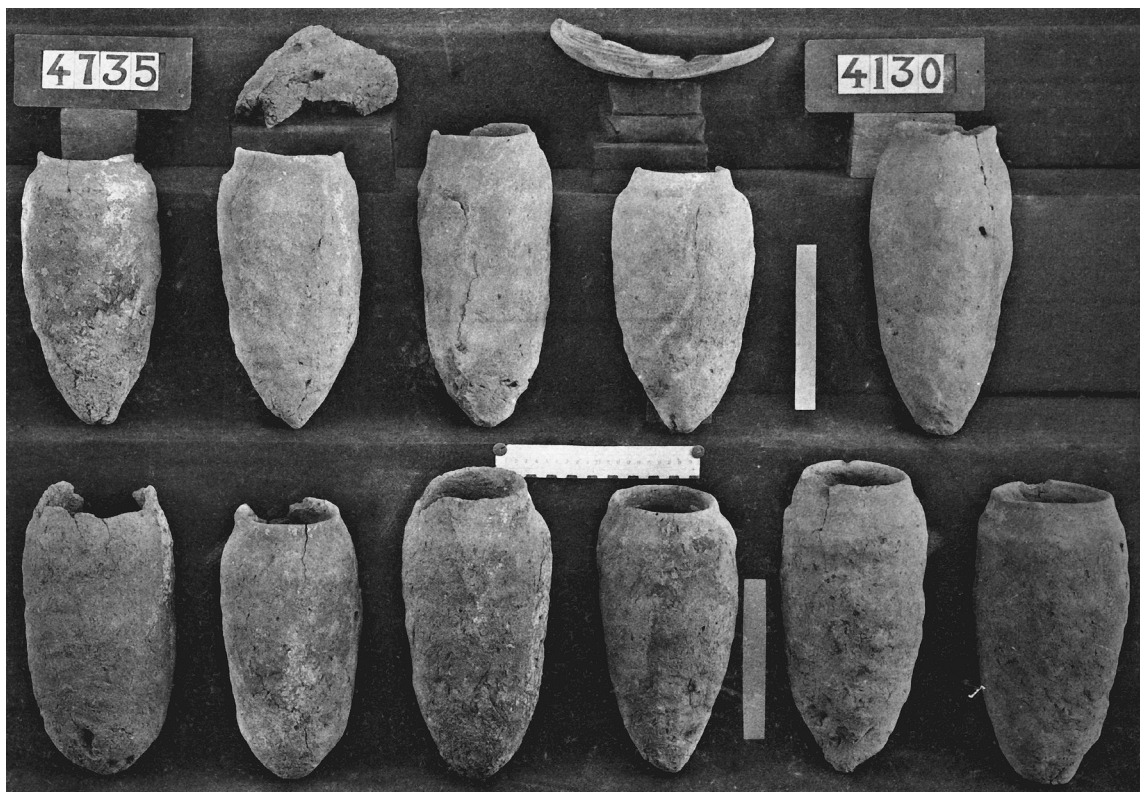
<sup>49</sup> Most of the pottery was illustrated only in scale 1:12, while several jar outlines were even shown on a 1:22 scale; MACE 1909, pp. 37–41; the pottery of cemetery N1500–N3000 was illustrated in scale 1:10 (REISNER 1908, pp. 91–98) and that of cemetery N500–N900 on a larger scale 1:4 (REISNER 1932, pp. 76–85), but, as stated before, surface treatment details were generally lacking, while this is significant for the periods under discussion.

<sup>50</sup> For an overview, see RAUE 1999; HARTMANN 2017, pp. 623–624 (figs. 7–8), 626 (fig. 9); VANTHUYNE 2017a; VANTHUYNE 2017b, 8-1–8-210; VANTHUYNE 2018a, pp. 99–102; VANTHUYNE 2018b; RAUE 2020.

<sup>51</sup> KÖHLER, SMYTHE 2004, p. 134 (fig. 2) (Helwan Operation 2); KÖHLER 2014, pp. 32, 37 (Helwan Operation 4).



Top



Bottom

FIG. 12. Beer jars with modelled rims (top) and direct rim (bottom) from Cemetery N3500.<sup>52</sup>

<sup>52</sup> The label "4130" is incorrect, as this was a 6th–9th Dynasty tomb, which did not contain any pottery (MACE 1909, p. 57, pl. 50a-b).

Problematic is that the tombs in cemetery N3000, as outlined above, are not datable to the end of the 2nd Dynasty, and that cemetery N3500 also contains three corbel-vaulted tombs. The latter are located in the northern end of the cemetery, as are all but one of the group C tombs (fig. 6). From there, Mace believes the cemetery evolved in a southerly direction.<sup>53</sup> The beer jars in cemetery N3500 evolved from those found in cemeteries N1500–N3000, and in cemetery N3500, we see the gradual appearance and development of bulbous or tapering beer jars with modelled rims (fig. 12 [top]) to more slender beer jars with direct rim (fig. 12 [bottom]),<sup>54</sup> but as stated *Kragenhals* beer jars are absent. Some of the earlier forms of beer jars with modelled rims<sup>55</sup> are comparable to the late 1st–2nd Dynasty beer jars at Elephantine,<sup>56</sup> whereas those with a direct rim<sup>57</sup> are comparable to similar Elephantine beer jars of the 2nd–early 3rd Dynasty.<sup>58</sup> Good parallels for both beer jar varieties were also found in tombs of the East cemetery at Adāima, datable between the 2nd and the beginning of the 3rd Dynasty.<sup>59</sup> This evolution was also observed in the cemetery of Helwan<sup>60</sup> and in the settlement of Tell el-Fara'in/Buto.<sup>61</sup> To conclude, the pottery in the tombs of cemetery N3500 is mainly datable to the 2nd Dynasty, though some tombs may be slightly older or younger. The absence of various above described key diagnostic 3rd Dynasty vessels, furthermore indicate that hardly any tombs are datable to the early 3rd Dynasty.<sup>62</sup> Certainly these vessels were not unknown in the region, as they were deposited amongst the nearby 3rd Dynasty stairway tombs at Beit Khallaf,<sup>63</sup> on the opposite side of the Nile, and even already in the late 2nd Dynasty royal tombs at Abydos.<sup>64</sup> Further support for a mainly 2nd Dynasty date comes from various copper vessels found in several tombs.<sup>65</sup> Hence, we see a chronological local south to north evolution from cemetery N1500, via cemetery N3000, to cemetery N3500 (fig. 1). However, as

<sup>53</sup> MACE 1909, pp. 17–18.

<sup>54</sup> MACE 1909, pp. 37–39, pl. 49–54. Quite a few beer jars of cemetery N3500 are kept in the Phoebe A. Hearst Museum of Anthropology (University of California, Berkeley). They can be viewed online via the museum website; N. Alexanian noted that Stephan Seidlmayer also distinguished two types of beer jars in cemetery N3500. However, it was not noticed that the beer jars with direct rim in cemetery N3500 are an earlier version of those found in the early 4th Dynasty tomb N739 in cemetery N500–N900, so that the 3rd Dynasty date of many tombs in cemetery N3500 by Alexanian is questionable (ALEXANIAN 2016, vol. I, pp. 146–157).

<sup>55</sup> Fig. 12; MACE 1909, p. 37 (fig. 86 [top row]), pl. 50a.

<sup>56</sup> RAUE 1999, pp. 175 (Abb. 34, no. 5), 177 (Abb. 35, no. 1); RAUE 2018, pp. 190 (Abb. 78, nos. 5, 7), 191; RAUE 2020, pp. 256–259, 262–264.

<sup>57</sup> Fig. 12; MACE 1909, p. 37 (fig. 86 [bottom row]), pl. 50b.

<sup>58</sup> RAUE 1999, pp. 177 (Abb. 35, no. 2), 180 (Abb. 37, no. 7); RAUE 2018, pp. 190 (Abb. 78, nos. 9, 14), 191; RAUE 2020, pp. 241–246, 249–250.

<sup>59</sup> Merely a few tombs at Adāima contained *Kragenhals* beer jars and just one tomb S914 contained a bowl with short inner ledge rim, whereby only a few tombs are datable at most to the early 3rd Dynasty (BUCHEZ 2007, vol. II, “Naqada IIID–III<sup>e</sup> dynastie” section).

<sup>60</sup> KÖHLER 2014; KÖHLER et al. 2017; KÖHLER et al. 2021.

<sup>61</sup> KÖHLER, SMYTHE 2004, pp. 133–134; HARTMANN 2017, pp. 621–622 (fig. 6).

<sup>62</sup> Note that the absence of *bDA*-bread moulds, *Kragenhals* beer jars and bowls with an inner ledge rim at Tell el-Iswid was also regarded as important in determining that the site was no longer occupied by the end of the 2nd Dynasty (BRÉAND 2014, p. 147; BRÉAND 2015, p. 50).

<sup>63</sup> GARSTANG 1903, pl. XXX–XXXI.

<sup>64</sup> ENGEL 1997, p. 28 (Abb. 4–8); ENGEL 2000, p. 58 (Abb. 12); KÖPP 2003, pp. 118 (Abb. 19a), 122, Taf. 25e; HARTMANN 2006, p. 104 (Abb. 14c); KÖPP-JUNK 2013, p. 65.

<sup>65</sup> RADWAN 1983, pp. 20 (no. 58—tomb 5175 [2nd half 2nd Dynasty]), 33 (no. 76—tomb 4376 [2nd Dynasty]), 33 (no. 77—tomb 4506 [late 2nd Dynasty]).

will be outlined below, it seems that there was a development in the opposite direction from cemetery N1500 to cemetery N500–N900 as well.

Now that it has been established that cemetery N3500 mainly contains tombs of the 2nd Dynasty, let us briefly return to the different tomb groups. The earliest burials were roofed with large, dressed slabs of limestone (group C), which rested on a mud brick lining. Comparable tombs were likely found in cemetery N500–N900 (type iv.a in Tab. 2), and further south at Naga el-Qara,<sup>66</sup> Hierakonpolis,<sup>67</sup> Elkab,<sup>68</sup> el-Ma‘mariya,<sup>69</sup> and el-Siba‘iya East,<sup>70</sup> likewise datable around about the 2nd Dynasty or slightly earlier.<sup>71</sup> Over time, we see that the slabs gradually decreased in size, forming rough blocks that were placed on top of the pit filling for extra protection.<sup>72</sup> The majority of these shallow burial pits were lined with mud brick, rocks or occasionally vertical slabs of stone, after the coffin was placed on the bottom of the pit. Thereafter, the latter was filled up with sand and covered with stones. Burial goods were found under the lining of the pit, and in or next to the burial container. Offerings were left behind on the surface. The burial equipment mostly consisted of ceramics and intentionally broken stone vessels. Elsewise, there were a few flint/silex flakes, copper objects and ivory bracelets. Malachite and kohl were likewise deposited in the graves, and one tomb had some gold and silver jewellery.<sup>73</sup>

Cemetery N3500 contained twenty-two burials in oval or rectangular, lidded or lidless, pottery coffins in lined or unlined pits with a stone cover.<sup>74</sup> In contrast to cemetery N500–N900, here there were only two or three juvenile pot burials. Absent were burials in mud coffins. Burials in large vats were likewise not present.<sup>75</sup> Probably the remaining people were therefore buried in small, rectangular wooden coffins, which had completely decayed by the time the tombs were excavated (fig. 6).<sup>76</sup> The vast majority of people were buried tightly contracted, lying on their left side, with their head to the local south, and facing west.<sup>77</sup>

<sup>66</sup> He. DE MORGAN 1908, pp. 142 (fig. 40), 143 (fig. 41); He. DE MORGAN 1912, pp. 41–43; Ja. DE MORGAN 1926, pp. 116 (fig. 142), 309 (fig. 355); NEEDLER 1984, pp. 122–123; VAN THUYNE 2017b, vol. III, pp. 10–9–10–10.

<sup>67</sup> QUIBELL, GREEN 1902, pp. 25–26; VAN THUYNE 2017b, vol. III, p. 10–10; Mace believed these tombs to be comparable to the group C tombs in cemetery N3500 (MACE 1909, p. 16, fn. 1).

<sup>68</sup> SAYCE, CLARKE 1905, pp. 240–241; VAN THUYNE 2017b, vol. III, pp. 10–11–10–14.

<sup>69</sup> He. DE MORGAN 1908, p. 140 (figs. 36–37); He. DE MORGAN 1912, pp. 30–38; Ja. DE MORGAN 1926, pp. 116 (fig. 143), 118 (fig. 146), 308 (fig. 354); NEEDLER 1984, pp. 90, 103–109; VAN THUYNE 2017b, vol. III, pp. 10–15–10–16.

<sup>70</sup> He. DE MORGAN 1984, pp. 64–65; NEEDLER 1984, pp. 146–147; VAN THUYNE 2017b, vol. III, pp. 10–16–10–17.

<sup>71</sup> HENDRICKX, VAN DEN BRINK 2002, pp. 362–364 (Tab. 23.1).

<sup>72</sup> Small tombs dated between the 2nd and 4th Dynasties, and containing stone-lined and/or stone-covered burials were also found at Armant (MOND, MYERS 1937, p. 20, pl. X (no. 3); VAN THUYNE 2017b, vol. III, pp. 10–22–10–24) and Mostagedda cemeteries 2600 and 2800 (BRUNTON 1937, pp. 94–97, 104, pl. LXIII—tomb 2821; VAN THUYNE 2017b, vol. III, pp. 10–70–10–71).

<sup>73</sup> MACE 1909.

<sup>74</sup> Pottery coffin burials were found in tombs of types A1 and A2; MACE 1909, pp. 15, 34–35.

<sup>75</sup> Large vat burials were only found in cemetery N500–N900 (blue circle in fig. 17).

<sup>76</sup> MACE 1909, p. 35.

<sup>77</sup> MACE 1909, pp. 14–37, 41, pl. 54–55.

## CEMETERY N500–N900

Cemetery N500–N900 is located east of cemetery N1500 (fig. 1), and contained, besides many Coptic graves, over 600 tombs, according to Reisner, datable between the end of the 2nd Dynasty and the end of the Old Kingdom. Also here, Reisner created a typology of tombs, ranging from pit burials incorporating in various ways rough stones or stone slabs into the tomb architecture (types iv.a-e), small and large stairway tombs (types IV.A–C), to small shaft tombs (types v.a-f) and large shaft tombs (types V.A–C), with or without mud brick superstructure. Reisner dated these particular tomb types between the late 2nd Dynasty and the 4th Dynasty (Tab. 2).<sup>78</sup>

Type iv.a	Small tomb—rectangular pit with burial well in bottom built of crude brick (c.b.); roofed with rough limestone slabs and plastered with mud; superstructure of c.b. with two niches on valley side and enclosure around this side (fig. 13).
Type iv.b	Small tomb—like type iv.a but with burial well of rubble or of upright slabs, or simply sunk in bottom of pit; roofed with stone slabs plastered with mud (fig. 14).
Type iv.c	Small tomb—degenerate variation of type iv.b; burial in wooden box or pottery cist [vat], covered with stones and plastered or with gravel filling laid directly on top of burial receptacle (covered with mat); superstructure as types iv.a-b (fig. 15).
Type iv.d	Small tomb—rectangular or oval pit with side burial chamber blocked with stones or c.b.; in Cem. N500–N900, usually beside large boulder with chamber under boulder (fig. 16).
Type iv.e	Small tomb—long open pit with steps in “north” end but no chamber; burial as type iv.c.
Type v.a	Small tomb—rectangular pit with burial well of c.b.; roofed with a closed corbel-vault (fig. 23).
Type v.b	Small tomb—rectangular pit usually with rounded ends, with low c.b. well roofed with narrow arch of leaning c.b.
Type v.c	Small tomb—modification of type iv.a; in “southern” part of pit, c.b. chamber open on “north” end and roofed with stone slabs; in “northern” part of pit, a square shaft lined wholly or partly with c.b. or rubble gave access to burial chamber.
Type v.d	Small tomb—small form of type V.A; square or nearly square shaft with square or nearly square chamber opening on “south”.
Type v.e	Small tomb—long pit with long side chamber; doorway blocked as usual with c.b.
Type v.f	Small tomb—rectangular open pit (see type iv.c).
Type IV	Large tomb—long stairway descending in cut in geological strata from “north” to chambers followed in strata; superstructure is c.b. mastaba with niches and enclosing wall.
Type IV.A	Large stairway tomb, which at Naga ed-Deir has one or two chambers in the burial apartment, and long stairway.
Type IV.B	Smaller stepped slope tomb usually with sort of shaft in front of single chamber.
Type IV.C	Stepped shaft tomb—nearly square shaft with steps in “northern” end of bottom of shaft, and chamber in “south” of shaft.
Type V.A	Large tomb—square shaft and square single chamber opening on “south”, blocked by c.b. wall; superstructure is c.b. mastaba with niches and enclosing wall.
Type V.B	Large tomb—square shaft and long chamber on “west”; superstructure is c.b. mastaba with niches.
Type V.C	Large tomb—long shaft and long side chamber on “west”, blocked by c.b. wall; superstructure is c.b. mastaba with niches.

Tab. 2. Cemetery N500–N900 tomb types iv, v, IV and V.

<sup>78</sup> For definition of tomb types, see REISNER 1932, pp. 6–8; tombs of types vi.a-f are tombs of the 5th and 6th Dynasties, which do not concern us here.

Illustrations of examples of tombs of types iv.a-d are provided below, as stone was used in the construction and/or cover of the graves, comparable to tombs found in cemeteries N1500 and N3500. Partial or complete layouts of the other tomb types can be viewed in fig. 17.

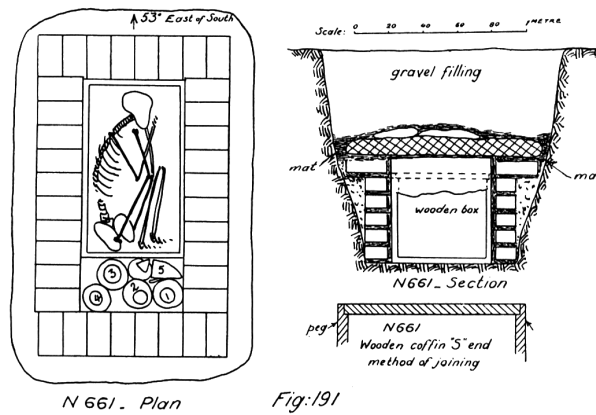
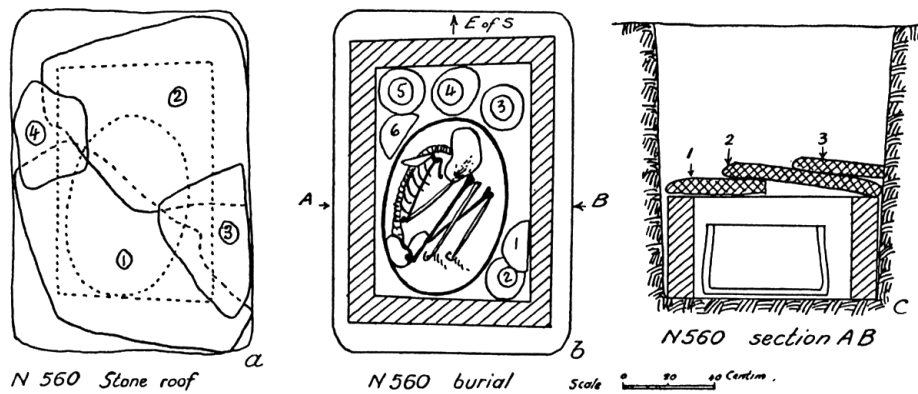


FIG. 13. Cemetery N500–N900 type iv.a tombs N560 (top) and N661 (bottom).<sup>79</sup>

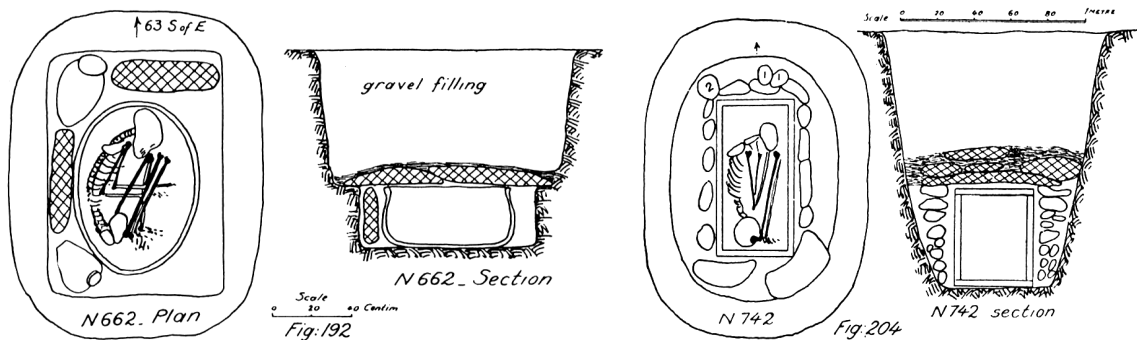


FIG. 14. Cemetery N500–N900 type iv.b tombs N662 (left) and N742 (right).<sup>80</sup>

<sup>79</sup> REISNER 1932, pp. 212 (fig. 120), 244 (fig. 191).

<sup>80</sup> REISNER 1932, pp. 244 (fig. 192), 250 (fig. 204).

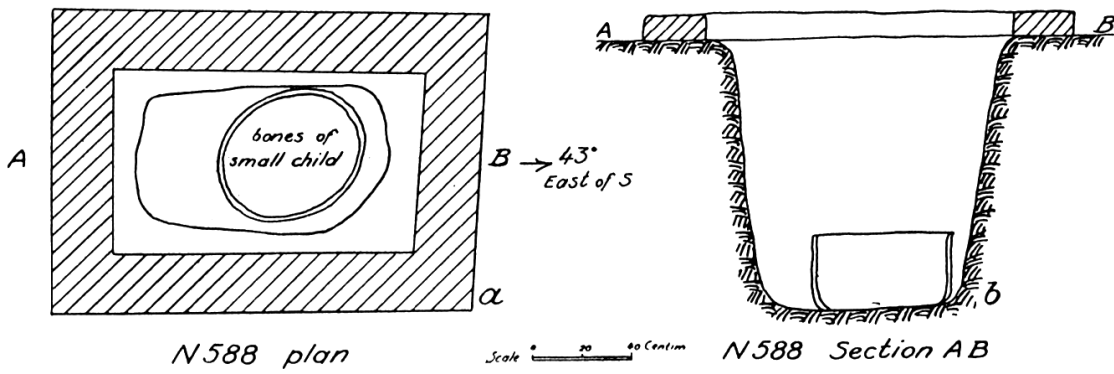


FIG. 15. Cemetery N500–N900 type iv.c tomb N588.<sup>81</sup>

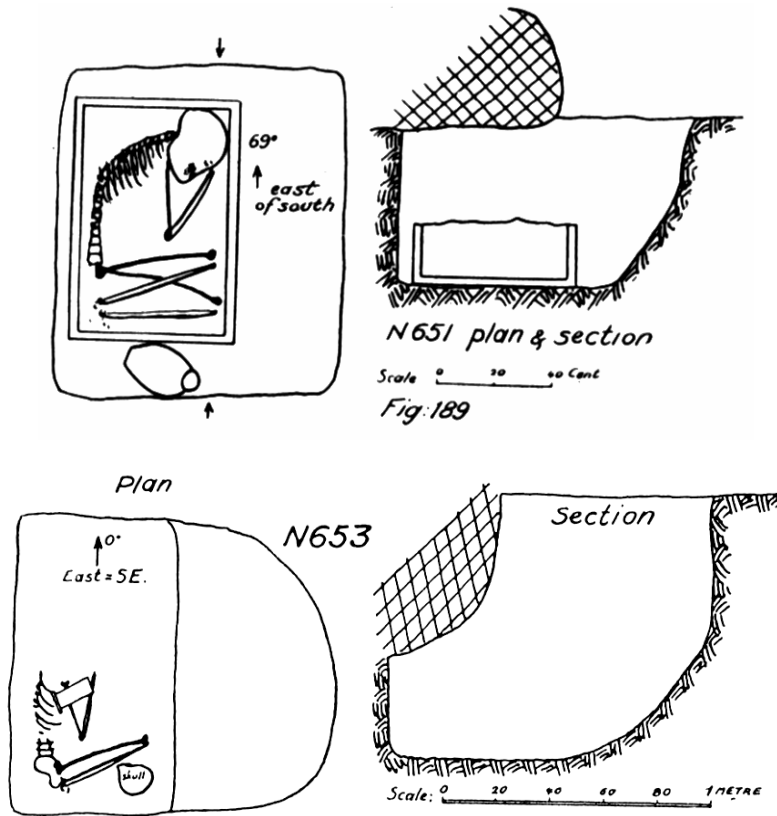


FIG. 16. Cemetery N500–N900 type iv.d tombs N651 (top) and N653 (bottom).<sup>82</sup>

<sup>81</sup> REISNER 1932, p. 225 (fig. 145).

<sup>82</sup> REISNER 1932, p. 243 (figs. 189–190).

Tomb type	End Dynasties 2–3			Dynasty 4			Pottery	
	Nos. of tombs	No. intact	No. with contents	Nos. of tombs	No. intact	No. with contents	Beer jar – Type IV	Bread mould – Type XXIX
iv.a	46 (7)	6 (6)	33 (6)				33 (13)	
iv.b	129 (15)	6 (6)	38 (10)	47			15 (12)	
iv.c	13			50		2	1	1
iv.d	9 (6)	2 (2)	8 (4)				4 (4)	
iv.e				1		1		
IV.A	6		4				3	1
IV.B	8		3					
IV.C				1	1	1	1	
v.a				15	10	12		3
v.b				5	5	5		4
v.c				3	2	2	1	1
v.d				14		8	1	3
v.e				2		2	1	1
v.f				23		13		4
V.A				1	1	1	24	2
V.B				1				
V.C				1	1	1	1	2
Total	211 (28)	14 (14)	125 (20)	164	20	48	85	22

TABLE 3. Reisner's summary of 2nd to 4th Dynasty tomb types and attestation of beer jars and bread moulds. Data of tomb group j in brackets.<sup>83</sup>

<sup>83</sup> Information compiled from REISNER 1932, pp. 54, 84–86, 183–184; There is a mistake on p. 86 and the bread mould of type XXIXc assigned to tomb type iv.b was actually found in a type v.f tomb.

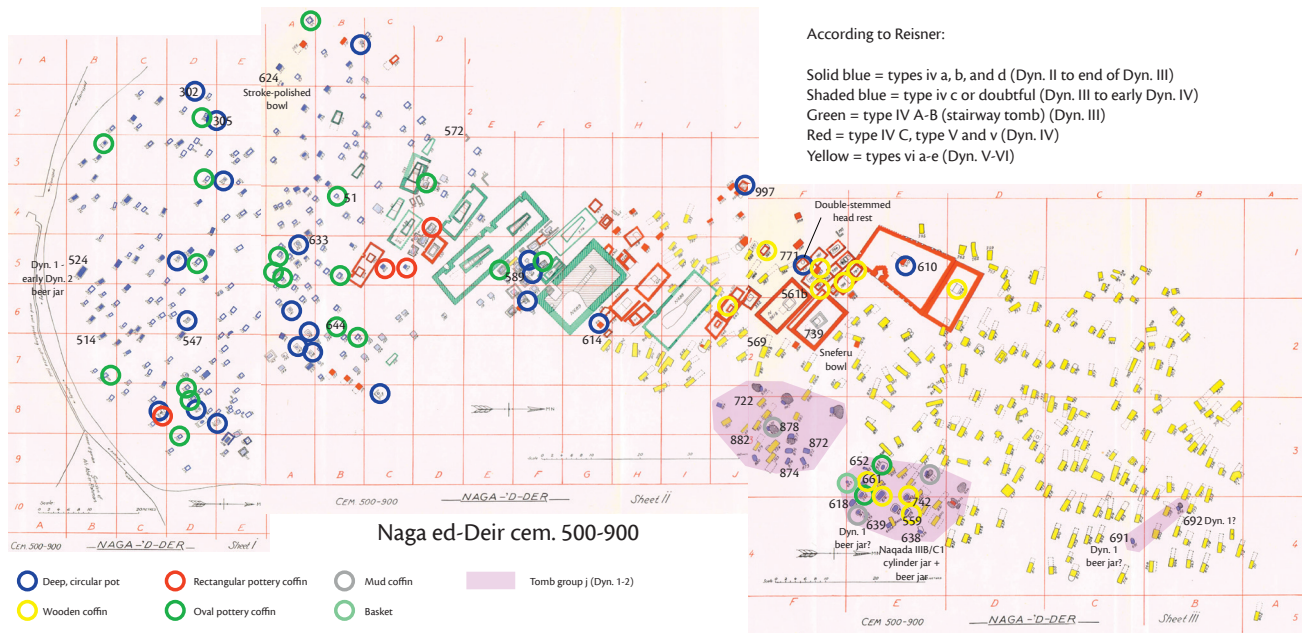


FIG. 17. Naga ed-Deir cemetery N500–N900.<sup>84</sup>

Following his analysis of cemetery finds, Reisner assumed that the cemetery evolved from the southwest in a northeastern direction during the 3rd–4th Dynasties, and that it served as burial ground for a series of local headmen.<sup>85</sup>

Tab. 3 shows that Reisner assigned 375 graves to tomb types that he dated between the late 2nd Dynasty and the 4th Dynasty. Out of the 139 pots found in these graves, 85 were beer jars and 22 were bread moulds. Using Reisner’s division, one could conclude that beer jars were more popular during late 2nd and 3rd Dynasty, whereas one was more likely to include a bread mould in a tomb in the 4th Dynasty.<sup>86</sup>

However, Reisner’s dating is incorrect in that older tombs predating the late 2nd Dynasty are also present, and this he more or less acknowledged, but he nevertheless still chose to date them later, in order to fit them into his chronology of the cemetery.<sup>87</sup> Primarily, the problem lies with the 28 graves assigned already by Reisner into the separate tomb group j,<sup>88</sup> and information about them is included in brackets in Tab. 3. These are tombs of types iv.a, iv.b, and iv.d (purple areas in fig. 17), found east/northeast of the large mastabas N561b (iii:F1-2<sup>89</sup>) and

<sup>84</sup> REISNER 1932, sheets i–iii.

<sup>85</sup> REISNER 1932, pp. 1–192; the attribution of tombs to these local headmen has been criticized by O’CONNOR (O’CONNOR 1974, p. 23) and ALEXANIAN (ALEXANIAN 2016, vol. I, pp. 181–182).

<sup>86</sup> All 24 beer jars of tomb type V.A in Tab. 3 were not found in the burial chamber, but rather were part of a surface deposit of tomb N739 (REISNER 1932, pp. 77, 81, 86, 248–250, pl. 19b).

<sup>87</sup> REISNER 1932, pp. 53, 87–88, 183–185.

<sup>88</sup> Tomb groups are clusters of tombs that Reisner has grouped together to explain the development of the cemetery (REISNER 1932, pp. 163–192).

<sup>89</sup> Grid location reference of tomb on N500–N900 sheets i–iii in fig. 17.

N739 (iii:F2).<sup>90</sup> The group j tombs included burials in wooden coffins, pottery coffins, matting or a basket. All mud coffin burials were likewise recorded in this tomb group.<sup>91</sup>

The oldest tomb N638 (iii:E4) in the group can in fact be dated to the Naqada IIIB/C1 period, and still contained a cylindrical jar, as well as a very early form of an ovoid beer jar with scraped surface, a barrel-shaped jar with modelled rim and a plate (fig. 18).<sup>92</sup> Similar beer jars were also found in tomb N691 (fig. 18)(iii:C4),<sup>93</sup> and these jars are identical to beer jars of NEDI type V Reisner recorded in cemeteries N1500 and N3000 (figs. 4–5).<sup>94</sup> Tomb N639 (iii:E4), located close to N638, contained, besides a similar beer jar, also a stone jar with many parallels from the Predynastic period up to the 1st Dynasty.<sup>95</sup> Squat, wide-shouldered stone jars identical to one found in N691, were also discovered in tombs N692 (iii:B4) and N559 (iii:E4),<sup>96</sup> which suggests that these tombs are contemporaneous. Tomb N559,<sup>97</sup> and tombs N560 (iii:E3-4)<sup>98</sup> and N661 (iii:E3)<sup>99</sup> (fig. 13), are perfect examples of intact type iv.a tombs, with at the bottom of a rectangular pit, a burial in a wooden coffin (N559, N661) or a pottery coffin (N560), surrounded by a mud brick lining, and covered with stone slabs resting on the mud bricks. Comparable tombs were found in cemetery N3500 (tomb group C), and further south, as outlined above, at Naga el-Qara, Hierakonpolis, Elkab, el-Ma‘mariya and el-Siba‘iya East, datable to the 2nd Dynasty or slightly earlier.<sup>100</sup>

90 REISNER 1932, pp. 55, 87–88, 183–185, maps iii–iv.

91 REISNER 1932, pp. 183–185.

92 PAHMA object no. 6-10302: cylindrical jar—type W71a/W80 (PETRIE 1921, pl. XXX; HENDRICKX 1999, pp. 24, 31, fig. 9); PAHMA object no. 6-10303: barrel-shaped jar—type 85 variant (PETRIE 1953, pl. XXV); REISNER 1932, pp. 239–240 (figs. 181–182), pl. 12b, 35d; a similar barrel-shaped jar was found in cemetery N3000 tomb N3018 (PAHMA object no. 6-966; REISNER 1908, pp. 85, 95—type XIVc).

93 REISNER 1932, p. 247, pl. 35d.

94 REISNER 1908, pp. 92–93—type V, pl. 55, 73–75; comparable beer jars were found by Junker in Tura tombs (JUNKER, DERRY 1912, pl. XL), datable between Naqada IIIB–IIIC2 (HENDRICKX, VAN DEN BRINK 2002, p. 350).

95 REISNER 1932, pp. 40–41 (fig. 7 [no. 2—type IVa(1)]), 77–78 (fig. 28 [no. 4]), 240–241 (fig. 184), pl. 34a, 36e; EL-KHOULI 1978, vol. I, pp. 190–205—type F; vol. III, pl. 55–57; ASTON 1994, p. 92, no. 4.

96 REISNER 1932, pp. 41–42 (fig. 9 [nos. 3–5—type Vc(2)]), 211 (fig. 119), 241 (fig. 184), 247, pl. 34a.

97 REISNER 1932, p. 211 (fig. 118), pl. 7a–c.

98 REISNER 1932, pp. 211–212 (fig. 120), pl. 7d–f.

99 REISNER 1932, pp. 243–244 (fig. 191), pl. 9b–d.

100 HENDRICKX, VAN DEN BRINK 2002, pp. 362–364 (Tab. 23.1).



FIG. 18. Pottery from tombs N624, N638 and N691 described in text.<sup>101</sup>



FIG. 19. Pottery from tombs N524 described in text.<sup>102</sup>

<sup>101</sup> REISNER 1932, pp. 236 (fig. 175), 237, 239–240 (figs. 181–182), pl. 35d.

<sup>102</sup> REISNER 1932, pp. 198–199 (figs. 82–83), pl. 36c.

Beer jars with modelled rims, similar to those used in cemetery N3500,<sup>103</sup> were also found in group j tombs N560 (fig. 21), N617 (iii:E4), N661 (fig. 20), N742 (iii:E3-4), N872 (fig. 21) (iii:F3), N874 (fig. 20)(iii:F3), N877 (iii:F3), and N878 (iii:F3).<sup>104</sup> Tomb N874 possibly forms a transitional tomb, as it not only contained one of the above-mentioned beer jars with modelled rim (jar N874 no. 2), but also a slightly older type of beer jar with scraped surface (jar N874 no. 3)(fig. 20 top left).<sup>105</sup> The latter can be linked with the ovoid beer jars with scraped surface (NEDI type V<sup>106</sup>), via tomb N524 (i:B5),<sup>107</sup> which had both types of older beer jars with scraped surface (fig. 19).<sup>108</sup>

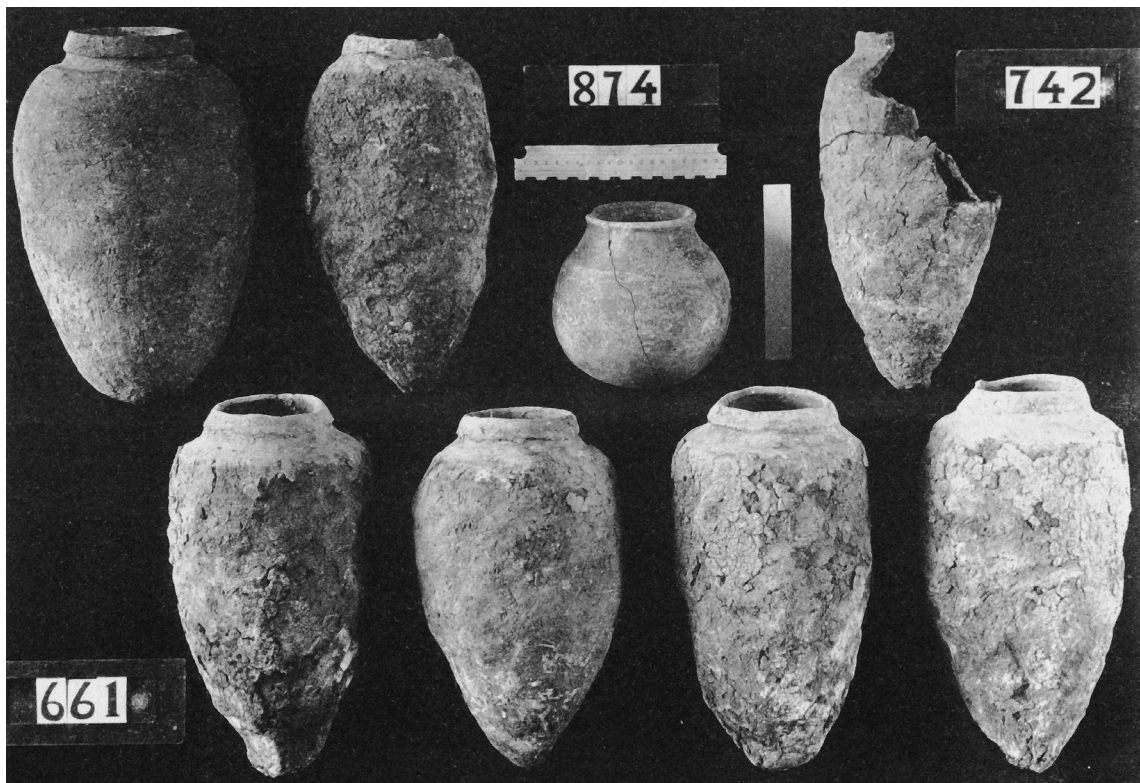


FIG. 20. Pottery from tombs N661 and N874 described in text.<sup>109</sup>

<sup>103</sup> MACE 1909, p. 37 (fig. 86 [top row]).

<sup>104</sup> REISNER 1932, pp. 78–80 (figs. 28 [top row]), 29, 31–32, pl. 36a-b, d, 37c.

<sup>105</sup> REISNER 1932, pp. 260–261 (fig. 223), pl. 37c.

<sup>106</sup> This type of beer jar was present in every tomb type and almost in every tomb of cemeteries N1500 and N3000 (REISNER 1908, pp. 17, 92–94).

<sup>107</sup> Tomb N524 is type iv.a tomb located in the southern tip of the cemetery (fig. 17).

<sup>108</sup> REISNER 1932, pp. 198–199 (fig. 83), pl. 36c; Reisner incorrectly wrote that tomb “N 524 on the verge of the cemetery is by position later and by its contents of the end of Dyn. III” (REISNER 1932, p. 88).

<sup>109</sup> REISNER 1932, pp. 243–244 (fig. 191), 260–261 (figs. 223, 225), pl. 37c.



FIG. 21. Pottery from tombs N560 and N872 described in text.<sup>110</sup>



FIG. 22. Pottery from tombs N514 (bottom row), N547 (two jars top left) and N771 (top right) described in text.<sup>111</sup>

<sup>110</sup> REISNER 1932, pp. 211–212 (figs. 120–121), 259–261 (figs. 223–224), pl. 36b.

<sup>111</sup> REISNER 1932, pp. 195–196 (figs. 70–71), 208–209 (figs. 113–114), 252 (fig. 209), 253, pl. 37a.

Tomb N872 may have contained an early version of a small, deep type of Maudum Bowl (bowl N872 no. 1),<sup>112</sup> datable to the 2nd Dynasty,<sup>113</sup> alongside a sharp-shouldered beer jar with modelled rim (jar N872 no. 2) (fig. 21).<sup>114</sup> The latter were e.g. also found in tomb N878<sup>115</sup> and in cemetery N3500 tombs N4573 and N4772 (fig. 6).<sup>116</sup> This type of beer jar is comparable to a Bashkatib type 67J beer jar, and at that site it was found in tombs 701, 709 and 732, together with many other Early Dynastic vessels.<sup>117</sup> They were also discovered together with *Kragenbals* beer jars at a campsite near the Maghara Abu ‘Aziz calcite alabaster quarry in Middle Egypt,<sup>118</sup> which suggests that this beer jar type was in use during the Early Dynastic period, but disappeared from the record at the latest early on in the 3rd Dynasty as it is no longer attested at many of the known early Old Kingdom sites.<sup>119</sup>

In conclusion, the parallels with cemeteries N1500, N3000 and N3500, and others discussed above, suggest that the graves in tomb group j are mainly datable between the 1st and 2nd Dynasties, and not to the late 2nd and the 3rd Dynasty, as Reisner believed. As a result, the use of mud coffins did not continue into the early Old Kingdom at Naga ed-Deir. Tab. 3 shows that all intact tomb type iv tombs were part of tomb group j. Removing these tombs from the equation, would render obsolete Reisner’s analysis of the remaining type iv tombs.

The latter observation is even more valid as there were additional Early Dynastic tombs in the southern end of the cemetery,<sup>120</sup> including the already mentioned N524 (tomb type iv.a), which was a large tomb, with a mud brick wall lining the bottom of the pit and on which stone slabs were placed as cover.<sup>121</sup> The stroke-polished bowl found in tomb N624 (fig. 18) (ii:A1) (tomb type iv.b)<sup>122</sup> is comparable to bowls of NEDI type XXIVa in cemeteries N1500–N3000.<sup>123</sup> Moreover, in this part of the cemetery also later versions of more slender beer jars with direct rim were found,<sup>124</sup> comparable to those used in cemetery N3500 (fig. 12).<sup>125</sup> Regrettably, only photographs of the beer jars found in tombs N514 (i:B7) and N547 (fig. 22)(i:D6-7) (both tomb type iv.a) were published and only two pottery drawings were made,<sup>126</sup> so that the spread of this kind of beer jar cannot be examined. This part of the cemetery contains most of the burials in oval pottery coffins (dark green circle in fig. 17) (Reisner code “poo”), and burials in or under a “deep circular basin” or “circular pottery cist” (blue circle in fig. 17) (Reisner code “poc”). The latter contained, according to Reisner, mostly juvenile burials, and were dated by

112 REISNER 1932, pp. 82 (fig. 34 [no. 8—type XIIIa]), 260–261 (fig. 223), pl. 36b.

113 OP DE BEECK 2004, pp. 247 (fig. 2 [nos. 1-2]), 249 (fig. 3 [nos. 1-2]).

114 REISNER 1932, pp. 77, 79 (fig. 31 [no. 1]), 260–261 (fig. 223), pl. 36b.

115 REISNER 1932, pp. 77, 80 (fig. 32 [no. 3]), 261–262 (fig. 229), pl. 36d.

116 MACE 1909, pl. 50a (bottom row—2nd from left; see fig. 12), 52a (top left).

117 PETRIE, BRUNTON, MURRAY 1923, pl. XLV, LII—type 67J.

118 VANTHUYNE 2018b, pp. 158–159, 165 (fig. 8).

119 VANTHUYNE 2017b, vol. III, pp. 10–85–10–86; RAUE 2020, p. 256 (no. Z1188).

120 The southern end of cemetery N500–N900 is located in sheet i, and sheet ii columns A-B (fig. 17).

121 REISNER 1932, pp. 198–199 (fig. 82a-b).

122 PAHMA object no. 6-10284: stroke-polished bowl; REISNER 1932, pp. 83 (fig. 35 [no. 3—type XXIVa]), 237, pl. 35d.

123 REISNER 1908, p. 97—type XXIVa.

124 REISNER 1932, p. 76 (fig. 27 [nos. 2, 5]), pl. 37a.

125 MACE 1909, p. 37 (fig. 86 [bottom row]), pl. 50b.

126 REISNER 1932, p. 76 (fig. 27 [nos. 2, 5]), pl. 37a (left five beer jars); PAHMA object nos. 6-10026 and 6-10027: slender beer jars with direct rim from tomb N547.

him to the 4th Dynasty,<sup>127</sup> but this cannot be verified as all the pot burials in the southern part of the cemetery have remained unpublished. They all belonged to tomb type iv.c, all of which were disturbed, and only one tomb N589 (ii:F5) of this type still contained a beer jar and a bread mould of which no drawings or photographs were published (tab. 3).<sup>128</sup> Moreover, Early Dynastic juvenile pot burials were e.g. common at el-Siba'iya East<sup>129</sup> and Adaïma,<sup>130</sup> and Early Dynastic large vat burials also e.g. already occurred in cemetery B at el-Amra<sup>131</sup> or in the late 2nd to early 4th Dynasty rock circle cemeteries in Middle Egypt,<sup>132</sup> so that the 4th Dynasty date of the pot burials in the southern end of cemetery N500–N900 is questionable. Considering that many tombs of type iv in this part of the cemetery were found empty, one can conclude that it is currently for a large part impossible to distinguish tombs datable to the Early Dynastic period, the 3rd Dynasty or the 4th Dynasty. This is all the more so as key diagnostic 3rd Dynasty pottery vessels, such as *Kragenhals* beer jars or bowls with an inner ledge rim are not present in cemetery N500–N900, whereas these vessel types were found in tombs at Beit Khallaf<sup>133</sup> and Abydos,<sup>134</sup> on the opposite side of the Nile. Reisner more or less confirmed this when he stated that “the pottery is inexpressibly less rich in forms than that found at more northern sites in Dyn. III and IV, and, in particular, the beautiful bowls of red-polished ware with recurved rims are wanting except for some fragments”.<sup>135</sup> The latter suggests that Maidum Bowls were likewise as good as absent.

The small tombs in the southern part of the cemetery that only contained stone vessels are likewise datable to any of these three periods, as in mastaba tombs further north in cemetery N500–N900,<sup>136</sup> and in Abydos cemetery D,<sup>137</sup> it was observed that stone vessels were no longer included in graves of the mid-late 4th Dynasty.

In the centre of cemetery N500–N900, there were a number of tombs with stairways or with a stairway leading to a deeper shaft ending in an underground chamber, with or without side recess for the burial, and with a stone portcullis or mud brick wall used to close off of the chamber. Some of the stairway tombs also had a mastaba superstructure (tomb types IV.A–B—green colour in fig. 17). These were dated by Reisner to the 3rd Dynasty, but as only the beer jar and *bDA*-bread mould of the tomb with the double stairway N573+N587 (ii:F4–E5) were published in drawing and photograph, it cannot be determined if there were any stairway tombs of the 2nd Dynasty.<sup>138</sup>

<sup>127</sup> REISNER 1932, pp. 15–16, 180.

<sup>128</sup> REISNER 1932, p. 18, 225–226, 365–368.

<sup>129</sup> He. DE MORGAN 1912, pp. 28–29; LORTET, GAILLARD 1909, pp. 214–218; He. DE MORGAN 1984, pp. 65–66.

<sup>130</sup> CRUBÉZY et al. 2002, pp. 348–409.

<sup>131</sup> RANDALL-MACIVER, MACE, GRIFFITH 1902, pp. 10–11, 25–26, pl. II.

<sup>132</sup> DE MEYER et al. 2011, pp. 682–684, 701 pl. 3, 702 pl. 6; VANTHUYNE 2012; VANTHUYNE 2016; VANTHUYNE 2017a; VANTHUYNE 2017b; VANTHUYNE 2018a.

<sup>133</sup> GARSTANG 1903, pl. XXX, nos. 1, 3, 4, II, XXXI, 29.

<sup>134</sup> ENGEL 1997, p. 28 (Abb. 8); ENGEL 2000, p. 58 (Abb. 12); HARTMANN 2006, p. 104 (Abb. 14c); KÖPP-JUNK 2013, p. 65.

<sup>135</sup> REISNER 1932, pp. 15–35, 180–182, 225–226 (fig. 146), 365–368.

<sup>136</sup> REISNER 1932, pp. 53–56.

<sup>137</sup> PEET, LOAT 1913, pp. 8–22, pl. I–III, VIII, XV; VANTHUYNE 2017b, vol. III, pp. 10–35–10–37.

<sup>138</sup> REISNER 1932, pp. 16–17, 76 (fig. 27 [no. 1]), 84 (fig. 36 [no. 2]), 169–173, pl. 37a (bottom row—right two vessels); see also p. 170 and fn. 2, regarding Reisner's opinion that stairway tombs were a 3rd Dynasty creation. This is certainly not the case, as they were already built in the 2nd Dynasty e.g. at Helwan (KÖHLER 2008, p. 125 [Tab. 1]; KÖHLER 2012, p. 283 [Tab. 1]). For an overview, see ALEXANIAN 2016, vol. I, pp. 387–394.

Mastaba tombs of the 4th Dynasty (red colour in fig. 17) were, however, located north of the group of stairway tombs, as a stone bowl with the name of Sneferu was found in tomb N739 (iii:F2)(tomb type V.A).<sup>139</sup> A mastaba (no. 573 or 27.w.1) in Tura, built in a similar way as N739, can also be dated by the pottery to the early 4th Dynasty.<sup>140</sup> Mastaba N610 (iii:E1) (tomb type V.B) is of slightly later date.<sup>141</sup> The large vat burial N610a, containing a *bDA*-bread mould, was dug into mastaba N610,<sup>142</sup> and is thereby datable to the 4th Dynasty. The nearby tomb N771 (iii:F1)(tomb type v.a) had a contracted burial in a large vat, covered by another large vat, at the bottom of a shallow pit. The cover vat was then surrounded and covered by a dome of mud bricks and mud plaster. Inside the lower vat, there was a contracted body, positioned on its left side, with head north, facing east. It also contained a *bDA*-bread mould (fig. 22), and double-stemmed wooden headrest (fig. 23).<sup>143</sup> The latter is comparable to examples datable to the 3rd–4th Dynasties,<sup>144</sup> found at Gebelein,<sup>145</sup> Bashkatib,<sup>146</sup> Tarkhan/Kafr ‘Ammar<sup>147</sup> and Saqqara.<sup>148</sup> Another double vat burial was found at the bottom of a deeper shaft in tomb N614 (ii:G6)(tomb type v.f), which also contained a *bDA*-bread mould.<sup>149</sup> These large vat burials with mud brick mastaba superstructure, which contained a bread mould, are comparable to the 4th Dynasty mastaba vat burials in Abydos cemetery D<sup>150</sup> and Reqaqna.<sup>151</sup>

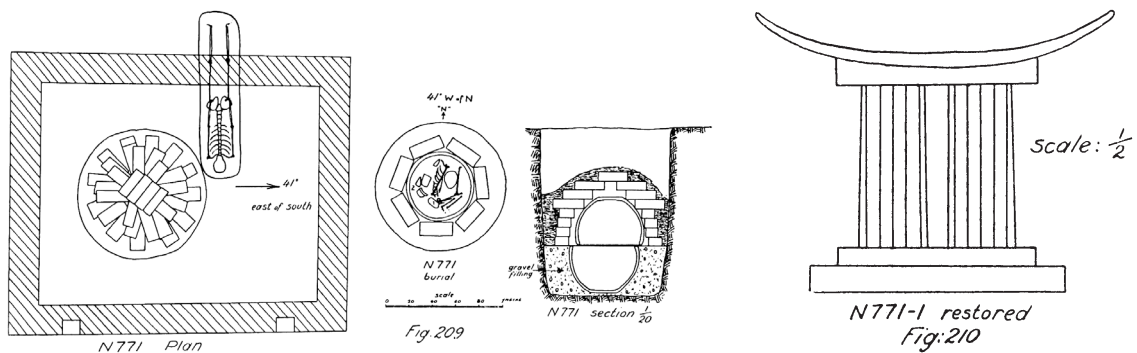


FIG. 23. Cemetery N500–N900 type v.a tomb N771.<sup>152</sup>

<sup>139</sup> REISNER 1932, pp. 20–24, 248–250.

<sup>140</sup> JUNKER, DERRY 1912, pp. 25–26 (Abb. 35–36), Taf. XXVIII; VANHUYNE 2017b, vol. III, p. 10–93.

<sup>141</sup> REISNER 1932, pp. 22, 171, 232–233.

<sup>142</sup> REISNER 1932, pp. 232–233 (fig. 164).

<sup>143</sup> REISNER 1932, pp. 252 (fig. 209), 253 (fig. 210), pl. 30c–f, 31a, 37a (bread mould above scale), 39c.

<sup>144</sup> PERRAUD 1997, pp. 54–55, 60–61, 277–278, 363, 382—Série Aa.

<sup>145</sup> FIORE MAROCHETTI et al. 2003, pp. 246, 255 (fig. 10a–b); VANHUYNE 2017b, vol. III, pp. 10–20–10–22.

<sup>146</sup> PETRIE, BRUNTON, MURRAY 1923, pl. XLV; VANHUYNE 2017b, vol. III, pp. 10–81–10–86.

<sup>147</sup> PETRIE, WAINWRIGHT, GARDINER 1913, pp. 13, 27, pl. XXVI; PETRIE, MACKAY 1915, p. 20, pl. XVIII (no. II); XIX (nos. 14–15), XX–XXI—type 6; VANHUYNE 2017b, vol. III, pp. 10–87–10–91.

<sup>148</sup> QUIBELL 1923, pp. 19, 22, 25, 32; VANHUYNE 2017b, vol. III, pp. 10–94–10–95.

<sup>149</sup> REISNER 1932, pp. 233–234 (fig. 167a–b), pl. 23d, 37a.

<sup>150</sup> PEET, LOAT 1913, pp. 8–22, pl. I–III, VIII, XV; VANHUYNE 2017b, vol. III, pp. 10–35–10–37.

<sup>151</sup> GARSTANG 1904, pp. 38–57, pl. 21, 26–27; VANHUYNE 2017b, vol. III, pp. 10–38–10–41.

<sup>152</sup> REISNER 1932, pp. 252 (fig. 209), 253 (fig. 210).

Regarding the burials in pottery coffins, they were certainly used in the Early Dynastic tombs of tomb group j, but the date of the tombs in the southern end of the cemetery is now uncertain. No detailed drawings of the 4th Dynasty large vats were published, so their shape cannot be compared. This is also the case for all of the pots used for juvenile burials.

In so far as one can rely on Reisner's dating, it appears that the shift in burial orientation from head south to head north seems to have occurred only at Naga ed-Deir during the 4th Dynasty,<sup>153</sup> as was also the case in the early Old Kingdom cemeteries that Quibell excavated at Ballas,<sup>154</sup> whereas e.g. at Elkab, this had already happened by the 3rd Dynasty.<sup>155</sup>

### FURTHER REMARKS

Pottery coffin and mud coffin burials were found in cemeteries N1500, N3000, N3500 and N500–N900, while pot burials were mainly found in the latter and in two or three instances also in cemetery N3500 (figs. 2–3, 6, 17). As outlined above, small tombs with a rock or stone slab cover were found in all four cemeteries, with the majority in cemeteries N3500 and N500–N900. In addition, Reisner reported another small plundered cemetery of stone-roofed graves north of cemetery N3500, in the extreme northern end of the site,<sup>156</sup> but it is unclear if this refers to the cemetery at el-Ahaiwah or to a cemetery whose location is now no longer known. Either way, the use of stone slabs and rocks in small tombs occurred in the Early Dynastic period, as was the case in other contemporary sites further south, and its use in the early Old Kingdom at Naga ed-Deir now needs to be reassessed.

*bDA*-bread moulds were only found in cemetery N500–N900. Except for two vessels, all others were discovered in tombs dated by Reisner to the 4th Dynasty (Tab. 3). Other key diagnostic vessels of the 3rd Dynasty, such as *Kragenhals* beer jars or bowls with an inner ledge rim were not recorded in any of the four Naga ed-Deir cemeteries discussed above, and Maidum Bowls were likewise as good as absent, save for some fragments in cemetery N500–N900.<sup>157</sup> Interestingly, the Phoebe A. Hearst Museum has an early Maidum Bowl with angular shoulder (diameter 16cm, height 9cm), which according to the museum register card supposedly derived from cemetery N7000.<sup>158</sup> This is unlikely, as this is considered to be a Predynastic cemetery.<sup>159</sup> The card, however, records that the bowl was “bought”, so it may have been a vessel that was looted from an unknown Naga ed-Deir grave.<sup>160</sup> The museum likewise holds beer jars, of types described above, supposedly also from cemetery N7000<sup>161</sup> and cemetery 100<sup>162</sup>,

<sup>153</sup> REISNER 1932, p. 24.

<sup>154</sup> PETRIE, QUIBELL 1896, pp. 1–18; VANTHUYNE 2022, pp. 244–245, 247.

<sup>155</sup> QUIBELL 1898, pp. 3–13.

<sup>156</sup> REISNER 1932, p. 163.

<sup>157</sup> If one were to apply the Naqada Date Group relative chronology used at Helwan (KÖHLER 2014, p. 37), then, according to the pottery of Naga ed-Deir, hardly any tombs of Date Groups IIID<sub>4</sub> or IV would be present at the site.

<sup>158</sup> PAHMA object no. 6-4476.

<sup>159</sup> LYTHGOE, DUNHAM 1965.

<sup>160</sup> The plundering formed the impetus to start working at Naga ed-Deir (REISNER 1908, p. VI).

<sup>161</sup> E.g. PAHMA objects nos. 6-4490, 6-4544, 6-4624.

<sup>162</sup> E.g. PAHMA objects nos. 6-13333 and 6-13855.

but the museum register cards do not report that these vessels were purchased. Either the museum records are incorrect or tombs of 1st to 4th Dynasties were found elsewhere that have not been published yet, or were not recognised at the time as deriving from this period. For example, tomb N7626 in cemetery N7000 was dated to the Naqada Ic period, and contained four burials (A-D). Lythgoe had, however, noted that burial D was placed on a slightly higher level than the three others, believing this was an intrusive burial. Recent archaeobotanical analysis of seeds in the tomb, now suggest the later burial took place between 2494 and 2460 calBCE (75.3% certainty),<sup>163</sup> i.e. the late 4th–early 5th Dynasty.<sup>164</sup>

Although recognisable 3rd Dynasty pottery is apparently as good as absent, one object was supposedly discovered with the name of the 3rd Dynasty king Khaba. According to Reisner, the name was on “a diorite bowl found by the Hearst Expedition in a mud-brick mastaba at Naga-ed-Deir”.<sup>165</sup> However, this bowl was never published and its whereabouts are unknown, which is rather strange considering it would be an important historical record.<sup>166</sup> Possibly Reisner found one or more additional mud brick mastabas elsewhere at Naga ed-Deir, outside the four cemeteries discussed above. Alternatively, in this particular case, one cannot but wonder whether Reisner accidentally mixed up the names of Khaba and Sneferu, as a diorite bowl with the name of the early 4th Dynasty king Sneferu was indeed found by the Hearst Expedition in mud brick mastaba N739.<sup>167</sup> Either way, the excavations of Reisner and Mace at Naga ed-Deir are in need of a more thorough re-evaluation.

## CONCLUSION

At first, Reisner and Mace’s Naga ed-Deir publications were exemplary for their time. Their dating of the Early Dynastic and early Old Kingdom tombs was primarily done via the morphological development of the tombs over time. Focus was also paid to the tomb content, though less so to the pottery. A closer examination of the latter in the publications, the online Naga ed-Deir collection at the Phoebe A. Hearst Museum of Anthropology, and work elsewhere in the subsequent century allow for an initial re-assessment of Reisner and Mace’s excavations of cemeteries N1500, N3000, N3500 and N500–N900.

Reisner dated almost all of the tombs in cemeteries N1500 and N3000 between the middle of the 1st Dynasty and the end of the 2nd Dynasty, with the tomb types in N3000 following up on those in cemetery N1500. According to Mace, cemetery N3500 came into use immediately after cemetery N3000, i.e. from latter half of the 2nd Dynasty into the 3rd Dynasty, and possibly even slightly later. For the tomb types under consideration in this article in

<sup>163</sup> LYTHGOE, DUNHAM 1965, pp. 409–411; SHAHAT 2021, pp. 122–124.

<sup>164</sup> SHORTLAND, BRONK RAMSEY 2013, pp. 276, 287.

<sup>165</sup> REISNER, FISHER 1911, p. 59.

<sup>166</sup> Michel Baud suggested it may well be the bowl without provenance (UC15800) in the Petrie Museum in London (BAUD 2002, p. 33, fn. 1). This is unlikely, as it was originally part of the MacGregor collection, who himself funded many expeditions in Egypt (BIERBRIER 2012, p. 347), whereas the work of Reisner at Naga ed-Deir was sponsored by Phoebe A. Hearst.

<sup>167</sup> PAHMA object no. 6-10716; REISNER 1932, pp. 248–249 (fig. 203), pl. 34c.

cemetery N500–N900 Reisner envisaged the cemetery use and its tomb type development between the late 2nd Dynasty and the 4th Dynasty.

The pottery, however, suggests a different timeframe, and it now appears that cemeteries N1500–N3000 were in use only up to the mid-2nd Dynasty, while the tombs in cemetery N3500 can be dated mainly to the 2nd Dynasty. The development of cemetery N500–N900 is not as straight-lined as Reisner had put forward. He had already seen that there was a separate tomb group j, with mainly stone-lined and/or covered tombs, but still he dated them later to fit them into his overall cemetery development. However, the pottery found in graves of tomb group j mainly dated to the Early Dynastic period, and comparable tombs with similar pottery were also found elsewhere in the cemetery, whereby Reisner's N500–N900 cemetery development no longer can be upheld. For many of the smaller tombs of type iv and burials in ceramic burial containers it is currently no longer possible to date them to the Early Dynastic period, the 3rd Dynasty or 4th Dynasty. The larger stairway and shaft tombs can still be placed in the latter two dynasties, though it is possible that some stairway tombs were already built in the preceding 2nd Dynasty, as was the case at other sites in Egypt.

This article serves to highlight that Reisner and Mace's tomb dating needs to be reconsidered. In the future, a comparison of a more detailed study of the tombs and their contents, based on extant site data and museum objects, with what we now know of the Early Dynastic and early Old Kingdom tomb development, burial customs and material culture, will make it possible to further fine-tune and integrate the traditions displayed at Naga ed-Deir within the wider relative chronological framework of Egyptian history, similar to what is e.g. being done by an Austrian project, led by Vera Müller, to re-examine Herman Junker's 1910 excavation at Tura.<sup>168</sup>

## BIBLIOGRAPHY

### ALEXANIAN 2016

N. Alexanian, "Die provinziellen Mastabgräber und Friedhöfe im Alten Reich", PhD Thesis, Philosophischen Fakultät der Universität Heidelberg, 2016.

### ASTON 1994

B.G. Aston, *Ancient Egyptian Stone Vessels: Materials and Forms*, SAGA 5, Heidelberg, 1994.

### BAUD 2002

M. Baud, *Djéser et la III<sup>e</sup> dynastie*, Les grand pharaons, Paris, 2002.

### BIERBRIER 2012

M.L. Bierbrier, *Who Was Who in Egyptology*, London, 2012.

### BRÉAND 2014

G. Bréand, "Les phases Naqada IIIC-IIID", in B. Midant-Reynes, N. Buchez (eds.), *Tell el-Iswid: 2006-2009*, FIFAO 73, Cairo, 2014, pp. 130–170.

### BRÉAND 2015

G. Bréand, "The Protodynastic Pottery from Tell el-Iswid South (Nile Delta) – Preliminary Report on the Naqada III Assemblage", *BCE* 25, 2015, pp. 37–76.

### BRUNTON 1937

G. Brunton, *Mostagedda and the Tasian Culture*, London, 1937.

<sup>168</sup> JUNKER, DERRY 1912; Austrian Science Fund FWF project no. P 3151: Zentrum oder Peripherie? Der Friedhof von Turah in der kreativen Spannung der Staatsentstehung am Ende des 4. und Beginn des 3. Jahrtausends v. Chr. in Ägypten.

- BUCHEZ 2007  
N. Buchez, “Chronologie et transformations structurelles de l’habitat au cours du prédynastique. Apports des mobiliers céramiques funéraires et domestiques du site d’Adaïma (Haute-Égypte)”, PhD Thesis, École des Hautes Études en Sciences Sociales Toulouse, 2007.
- CLARK 2016  
R. Clark, *Tomb Security in Ancient Egypt from the Predynastic to the Pyramid Age*, ArchaeoEg 13, Oxford, 2016.
- CRUBÉZY et al. 2002  
E. Crubézy, T. Janin, B. Midant-Reynes, N. Buchez, V. Alunni, C. Hochstrasser-Petit, A. Lecler, *Adaïma 2: La nécropole prédynastique*, FIFAO 47, Cairo, 2002.
- DE MEYER et al. 2011  
M. De Meyer, S. Vereecken, B. Vanthuyne, S. Hendrickx, L. Op de Beeck, H. Willems, “The Early Old Kingdom at Nuwayrât in the 16th Upper Egyptian Nome”, in D. Aston, B. Bader, C. Gallorini, P. Nicholson, S. Buckingham (eds.), *Under the Potter’s Tree: Studies on Ancient Egypt Presented to Janine Bourriau on the Occasion of her 70th Birthday*, OLA 204, Leuven, 2011, pp. 679–702.
- ENGEL 1997  
E.-M. Engel, “Io. Abydos. Umm el-Qa’ab, Grab des Chasechemui”, *BCE* 20, 1997, pp. 25–28.
- ENGEL 2000  
E.-M. Engel, “II. Abydos. Umm el-Qa’ab, Grab des Chasechemui”, *BCE* 21, 2000, pp. 50–58.
- ENGEL 2017  
E.-M. Engel, *Umm el-Qaab VI: Das Grab des Qa’a – Architektur und Inventar*, ArchVer 100, Wiesbaden, 2017.
- FIORE MAROCHETTI et al. 2003  
E. Fiore Marochetti, A. Curti, S. Demichelis, F. Janot, F. Cesarani, R. Grilletto, “Le paquet sépulture anonyme de la IV<sup>e</sup> dynastie – provenant de Gébélein”, *BIFAO* 103, 2003, pp. 235–256.
- GARSTANG 1903  
J. Garstang, *Mahâsna and Bêt Khallâf*, BSAE/ERA 7, London, 1903.
- GARSTANG 1904  
J. Garstang, *Report of Excavations at Reqâqnah 1901-1902: Tombs of the Third Egyptian Dynasty at Reqâqnah and Bêt Khallâf*, London, 1904.
- HARTMANN 2006  
R. Hartmann, “Funde”, in G. Dreyer, A. Effland, U. Effland, E.-M. Engel, R. Hartmann, U. Hartung, C. Lacher, V. Müller, A. Pokorny, “Umm el-Qaab. Nachuntersuchungen im frühzeitlichen Königsfriedhof. 16./17./18. Vorbericht”, *MDAIK* 62, 2006, pp. 102–110.
- HARTMANN 2016  
R. Hartmann, *Umm el-Qaab IV: Die Keramik der älteren und mittleren Naqadakultur aus dem prädynastischen Friedhof U in Abydos (Umm el-Qaab)*, ArchVer 98, Wiesbaden, 2016.
- HARTMANN 2017  
R. Hartmann, “Pottery from the Recent Excavations in the Early Dynastic Settlement of Tell el-Fara’in/Buto”, in B. Midant-Reynes, Y. Tristant, E.M. Ryan (eds), *Egypt at its Origins 5: Proceedings of the Fifth International Conference “Origin of the State: Predynastic and Early Dynastic Egypt”*, Cairo, 13th–18th April 2014, OLA 260, Leuven, 2017, pp. 609–630.
- HENDRICKX 1989  
C. Hendrickx, “De grafvelden der Naqada-cultuur in Zuid-Egypte, met bijzondere aandacht voor het Naqada III grafveld te Elkab. Interne chronologie en sociale differentiatie”, PhD Thesis, KU Leuven, 1989.
- HENDRICKX 1998  
S. Hendrickx, “La nécropole de l’Est à Adaïma. Position chronologique et parallèles”, *Archéo-Nil* 8, 1998, pp. 105–128.
- HENDRICKX 1999  
S. Hendrickx, “La chronologie de la préhistoire tardive et des débuts de l’histoire de l’Égypte”, *Archéo-Nil* 9, 1999, pp. 13–81.
- HENDRICKX 2006  
S. Hendrickx, “Predynastic-Early Dynastic Chronology”, in E. Hornung, R. Krauss, D.A. Warburton (eds.), *Ancient Egyptian Chronology*, HOS 83, Leiden, 2006, pp. 55–93.

## HENDRICKX, VAN DEN BRINK 2002

S. Hendrickx, E.C.M. van den Brink, "Inventory of Predynastic and Early Dynastic Cemetery and Settlement Sites in the Egyptian Nile Valley", in E.C.M. van den Brink, T.E. Levy (eds.), *Egypt and the Levant, New Approaches to Anthropological Archaeology*, London, 2002, pp. 346–399.

## HENDRICKX et al. 2016

S. Hendrickx, W. Claes, A. Devillers, G. Storms, C. Swerts, S. Vereecken, "The Pottery from the Late Early Dynastic and Early Old Kingdom Settlement at Elkab (Excavation Season 2010)", in B. Bader, C.M. Knoblauch, C.E. Köhler (eds.), *Vienna 2: Ancient Egyptian Ceramics in the 21st Century – Proceedings of the International Conference Held at the University of Vienna, 14th–18th of May, 2012*, OLA 245, Leuven, 2016, pp. 259–276.

## HOSSEIN 2011

Y.M. Hossein, "A New Archaic Period Cemetery at Abydos", in R.F. Friedman, P.N. Fiske (eds.), *Egypt at its Origins 3: Proceedings of the Third International Conference "Origin of the State: Predynastic and Early Dynastic Egypt"*, London, 27th July–1st August 2008, OLA 205, Leuven, 2011, pp. 269–280.

## HUSSEIN 2016

Y.M. Hossein, "The Brick Architecture of a New Tomb from the Early Dynastic Cemetery at South Abydos", in M.D. Adams (ed.), *Egypt at its Origins 4: Proceedings of the Fourth International Conference "Origin of the State: Predynastic and Early Dynastic Egypt"*, New York, 26th–30th July 2011, OLA 252, Leuven, 2016, pp. 299–308.

## JUCHA 2009

M. Jucha, "Beer Jars of Naqada III Period: A View from Tell el-Farkha", in T.I. Rzeuska, A. Wodzińska (eds.), *Studies on Old Kingdom Pottery*, Warsaw, 2009, pp. 49–60.

## JUCHA, MAĆZYŃSKA 2011

M. Jucha, A. Maćzyńska, "Settlement Sites in the Nile Delta", *Archéo-Nil* 21, 2011, pp. 33–50.

## JUNKER, DERRY 1912

H. Junker, D.E. Derry, *Bericht über die Grabungen der Kaiserlichen Akademie der Wissenschaften in Wien auf dem Friedhof in Turah, Winter 1909-1910*, DAWW 56/1, Vienna, 1912.

## EL-KHOULI 1978

A. el-Khouli, *Egyptian Stone Vessels: Predynastic Period to Dynasty III – Typology and Analysis*, SDAIK 5, Mainz am Rhein, 1978.

## KÖHLER 2004

C.E. Köhler, "On the Origin of Memphis – The New Excavations in the Early Dynastic Necropolis at Helwan", in S. Hendrickx, R.F. Friedman (eds.), *Egypt at its Origins: Studies in Memory of Barbara Adams – Proceedings of the International Conference "Origin of the State: Predynastic and Early Dynastic Egypt"*, Kraków, 28th August–1st September 2002, OLA 138, Leuven, 2004, pp. 295–315.

## KÖHLER 2008

C.E. Köhler, "The Helwan Cemetery", *Archéo-Nil* 18, 2008, pp. 113–130.

## KÖHLER 2012

C.E. Köhler, "The Orientation of Cult Niches and Burial Chambers in Early Dynastic Tombs at Helwan", in L. Evans (ed.), *Ancient Memphis: 'Enduring is the Perfection' – Proceedings of the International Conference Held at Macquarie University, Sydney, on August 14–15, 2008*, OLA 214, Leuven, 2012, pp. 279–297.

## KÖHLER 2014

C.E. Köhler, *Helwan III: Excavations in Operation 4, Tombs 1–50*, SAGA 26, Rahden, 2014.

## KÖHLER, SMYTHE 2004

C.E. Köhler, J.C. Smythe, "Early Dynastic Pottery from Helwan: Establishing a Ceramic Corpus of the Naqada III Period", *CCE* 7, 2004, pp. 123–143.

## KÖHLER et al. 2017

C.E. Köhler, C. Marshall, A.M.A. Ali, H. Böhm, M. Abd El Karem, *Helwan IV: Excavations in Operation 4, Tombs 51–100*, SAGA 28, Rahden, 2014.

- KÖHLER et al. 2021  
C.E. Köhler, C. Marshall, H. Böhm, A.M.A. Ali, F. Junge, N. Kuch, *Helwan V: Excavations in Operation 4, Tombs 101–151*, Excavations at Helwan I, Rahden, 2021.
- KÖPP 2003  
H. Köpp, “Keramik”, in G. Dreyer, R. Hartmann, U. Hartung, T. Hikade, H. Köpp, C. Lacher, V. Müller, A. Nerlich, A. Zink, “Umm el-Qaab. Nachuntersuchungen im frühzeitlichen Königsfriedhof. 13./14./15. Vorbericht”, *MDAIK* 59, 2003, pp. 116–124.
- KÖPP-JUNK 2013  
H. Köpp-Junk, “Grab des Chasechemui”, in G. Dreyer, E.-M. Engel, R. Hartmann, H. Köpp-Junk, P. Meyrat, V. Müller, I. Regulski, “Umm el-Qaab. Nachuntersuchungen im frühzeitlichen Königsfriedhof. 22./23./24. Vorbericht”, *MDAIK* 69, 2013, pp. 65–69.
- KROENKE 2010  
K.R. Kroenke, “The Provincial Cemeteries of Naga ed-Deir: A Comprehensive Study of Tomb Models Dating from the Late Old Kingdom to the Late Middle Kingdom”, PhD Thesis, University of California, Berkeley, 2010.
- LORTET, GAILLARD 1909  
L. Lortet, C. Gaillard, *La faune momifiée de l'ancienne Égypte et recherches anthropologiques (3<sup>e</sup>, 4<sup>e</sup> et 5<sup>e</sup> séries)*, AMHNL 10, Lyon, 1909.
- LYTHGOE, DUNHAM 1965  
A.M. Lythgoe, D. Dunham, *The Predynastic Cemetery N 7000: Naga-ed-Dêr – Part IV*, UCPEA 7, Los Angeles, 1965.
- MACE 1909  
A.C. Mace, *The Early Dynastic Cemeteries of Naga-ed-Dêr II*, UCPEA 3, Leipzig, 1909.
- MOND, MYERS 1937  
R. Mond, O.H. Myers, *Cemeteries of Armant I*, MEES 42, London, 1937.
- He. DE MORGAN 1908  
He. de Morgan, “Notes sur les stations quaternaires et sur l'âge du cuivre en Égypte”, *Revue de l'École d'Anthropologie de Paris* 18, 1908, pp. 133–149.
- He. DE MORGAN 1912  
He. de Morgan, “Report on Excavations Made in Upper Egypt During the Winter 1907–1908”, *ASAE* 12, 1912, pp. 25–50.
- He. DE MORGAN 1984  
He. de Morgan, “Researches in the Nile Valley Between Esna and Gebel Es-Silsila”, in W. NEEDLER (ed.), *Predynastic and Archaic Egypt in the Brooklyn Museum*, WilMon 9, New York, 1984, pp. 50–69.
- Ja. DE MORGAN 1926  
Ja. de Morgan, *La préhistoire orientale, Tome II. L'Égypte et l'Afrique du Nord*, Paris, 1926.
- NEEDLER 1984  
W. Needler, *Predynastic and Archaic Egypt in the Brooklyn Museum*, WilbMon 9, Brooklyn, 1984.
- O'CONNOR 1974  
D. O'Connor, “Political Systems and Archaeological Data in Egypt: 2600–1780 B.C.”, *WorldArch* 6/1, 1974, pp. 15–38.
- OP DE BEECK 2004  
L. Op de Beeck, “Possibilities and Restrictions for the Use of Maidum-bowls as Chronological Indicators”, *CCE* 7, 2004, pp. 239–280.
- PEET, LOAT 1913  
T.E. Peet, W.L.S. Loat, *The Cemeteries of Abydos, Part III: 1912–1913*, MEEF 35, London, 1913.
- PERRAUD 1997  
M. Perraud, “Appuis-tête de l'Égypte pharaonique: typologie et significations”, PhD Thesis, Strasbourg University, 1997.
- PETRIE 1900  
W.M.F. Petrie, *The Royal Tombs of the First Dynasty*, MEEF 18, London, 1900.
- PETRIE 1901  
W.M.F. Petrie, *The Royal Tombs of the Earliest Dynasties II*, MEEF 21, London, 1901.
- PETRIE 1902  
W.M.F. Petrie, *Abydos: Part I*, MEEF 22, London, 1902.
- PETRIE 1921  
W.M.F. Petrie, *Corpus of Prehistoric Pottery and Palettes*, BSAE/ERA 32, London, 1921.

- PETRIE 1953  
W.M.F. Petrie, *Corpus of Proto-dynastic Pottery: Thirty Plates of Drawings*, BSEA 66, London, 1953.
- PETRIE, MACKAY 1915  
W.M.F. Petrie, E. Mackay, *Heliopolis, Kafr Ammar and Shurafa*, BSAE/ERA 24, London, 1915.
- PETRIE, QUIBELL 1896  
W.M.F. Petrie, J.E. Quibell, *Naqada and Ballas*, London, 1896.
- PETRIE, BRUNTON, MURRAY 1923  
W.M.F. Petrie, G. Brunton, M.A. Murray, *Lahun II*, BSAE/ERA 33, London, 1923.
- PETRIE, WAINWRIGHT, GARDINER 1913  
W.M.F. Petrie, G.A. Wainwright, A.H. Gardiner, *Tarkhan I and Memphis V*, BSAE/ERA 23, London, 1913.
- PODZORSKI 2008  
P.V. Podzorski, "The Early Dynastic Mastabas of Naga ed-Deir", *Archéo-Nil* 18, 2008, pp. 89–102.
- QUIBELL 1898  
J.E. Quibell, *El Kab*, BSAE/ERA 3, London, 1898.
- QUIBELL 1923  
J.E. Quibell, *Excavations at Saqqara (1912-14): Archaic Mastabas*, Excavations at Saqqara, Cairo, 1923.
- QUIBELL, GREEN 1902  
J.E. Quibell, F.W. Green, *Hierakonpolis II*, ERA 5, London, 1902.
- RADWAN 1983  
A. Radwan, *Die Kupfer- und Bronzegefäße Ägyptens (Von den Anfängen bis zum Beginn der Spätzeit)*, Prähistorische Bronzefunde 2/2, Vienna, 1983.
- RANDALL-MACIVER, MACE, GRIFFITH 1902  
D. Randall-MacIver, A.C. Mace, F.L. Griffith, *El Amrah and Abydos 1899-1901*, MEEF 23, London, 1902.
- RAUE 1999  
D. Raue, "Ägyptische und nubische Keramik der 1.-4. Dynastie", in W. Kaiser, F. Arnold, M. Bommas, T. Hikade, F. Hoffman, H. Jaritz, P. Kopp, W. Niederberger, J.-P. Paetznick, B. von Pilgrim, C. von Pilgrim, D. Raue, T.I. Rzeuska, S. Schaten, A. Seiler, L. Stalder, M. Ziermann, "Stadt und Tempel von Elephantine 25./26./27. Grabungsbericht", *MDAIK* 55, 1999, pp. 173–189.
- RAUE 2018  
D. Raue, "Zu den Keramikfunden der früh-dynastischen Zeit und des Alten Reichs", in P. Kopp (ed.), *Elephantine XXIV: Funde und Befunde aus der Umgebung des Satetempels – Grabungen 2006-2009*, ArchVer 104, Wiesbaden, 2018, pp. 185–236.
- RAUE 2020  
D. Raue, *Keramik der 1. bis 6. Dynastie auf Elephantine: Katalog der Formen und ihrer chronologischen Einordnung*, MAPDAIK 1, Cairo, 2020.
- REISNER 1901  
G.A. Reisner, "Work of the University of California at El-Ahaiwah and Naga-ed-Der", in F.L. Griffith (ed.), *Archaeological Report 1900-1901*, London, 1901, pp. 23–25.
- REISNER 1904  
G.A. Reisner, "Work of the Expedition of the University of California at Naga-ed-Der", *ASAE* 5, 1904, pp. 105–109, pl. I–VII.
- REISNER 1908  
G.A. Reisner; *The Early Dynastic Cemeteries of Naga-ed-Der I*, UCPA 2, Leipzig, 1908.
- REISNER 1932  
G.A. Reisner, *A Provincial Cemetery of the Pyramid Age: Naga-ed-Der III*, UCPA 6, Berkeley, 1932.
- REISNER 1936  
G.A. Reisner, *The Development of the Egyptian Tomb down to the Accession of Cheops*, Cambridge, 1936.
- REISNER, FISHER 1911  
G.A. Reisner, C.S. Fisher, "The Work of the Harvard University – Museum of Fine Arts Egyptian Expedition", *BMFA* 9/54, 1911, pp. 54–59.
- SAYCE, CLARKE 1905  
M.A.H. Sayce, S. Clarke, "Report on Certain Excavations Made at El-Kab", *ASAE* 6, 1905, pp. 239–272.

## SHAHAT 2021

A. Shahat, "Climate Change and the Social History of Food in Ancient Egypt: Between Humanities and Life Sciences", PhD Thesis, University of California, Los Angeles, 2021.

## SHORTLAND, BRONK RAMSEY 2013

A.J. Shortland, C. Bronk Ramsey (eds.), *Radiocarbon and the Chronologies of Ancient Egypt*, Oxford, 2013.

## SMYTHE 2008

J.C. Smythe, "New Results from a Second Storage Tomb at Helwan: Implications for the Naqada III Period in the Memphite Region", in B. Midant-Reynes, Y. Tristant (eds.), *Egypt at its Origins 2: Proceedings of the International Conference "Origin of the State: Predynastic and Early Dynastic Egypt"*, Toulouse (France), 5th–8th September 2005, OLA 172, Leuven, 2008, pp. 151–185.

## VANTHUYNE 2012

B. Vanthuyne, "Rotscirkelgraven in Deir el Bersja en Deir Abu Hinnis", *Ta-Mery* 5, 2012, pp. 76–85.

## VANTHUYNE 2016

B. Vanthuyne, "Early Old Kingdom Rock Circle Cemeteries in Deir el-Bersha and Deir Abu Hinnis", in M.D. Adams (ed.), *Egypt at its Origins 4: Proceedings of the Fourth International Conference "Origin of the State: Predynastic and Early Dynastic Egypt"*, New York, 26th–30th July 2011, OLA 252, Leuven, 2016, pp. 427–459.

## VANTHUYNE 2017a

B. Vanthuyne, "The Rock Circle Cemetery in Dayr Abū Ḥinnis", in B. Midant-Reynes, Y. Tristant, E.M. Ryan (eds.), *Egypt at its Origins 5:*

*Proceedings of the Fifth International Conference "Origin of the State: Predynastic and Early Dynastic Egypt"*, Cairo, 13th–18th April 2014, OLA 260, Leuven, 2017, pp. 497–519.

## VANTHUYNE 2017b

B. Vanthuyne, "Early Old Kingdom Rock Circle Cemeteries in the 15th and 16th Nomes of Upper Egypt. A socio-archaeological investigation of the cemeteries in Dayr al-Barshā, Dayr Abū Ḥinnis, Banī Ḥasan al-Shurūq and Nuwayrāt", PhD Thesis, KU Leuven, 2017.

## VANTHUYNE 2018a

B. Vanthuyne, "The Beni Hasan el-Shuruq Region in the Old Kingdom. A Preliminary Survey Report", *PES* 21, 2018, pp. 94–105.

## VANTHUYNE 2018b

B. Vanthuyne, "Late Early Dynastic – Early Old Kingdom Pottery from Campsites around the Maghāra Abū 'Azīz Calcite Alabaster Quarry in Middle Egypt", *BEC* 28, 2018, pp. 157–167.

## VANTHUYNE 2021

B. Vanthuyne, "Late Early Dynastic – Early Old Kingdom Collared/*Kragenhals* Beer Jars", in W. Claes, M. De Meyer, M. Eyckerman, D. Huyge (eds.), *Remove that Pyramid! Studies on the Archaeology and History of Predynastic and Pharaonic Egypt in Honour of Stan Hendrickx*, OLA 305, Leuven, 2021, pp. 1039–1058.

## VANTHUYNE 2022

B. Vanthuyne, "J.E. Quibell's 1894–95 Ballas Excavation: Interim Report on the Second–Fourth Dynasty Cemeteries", *JEA* 108/1-2, 2022, pp. 231–247.