CHAPTER 3. OSTRACA WITH MARKS OF THE 20TH DYNASTY. PART I: THE DUTY ROSTERS

3.1 INTRODUCTION

After our treatment of the ostraca from the 18th Dynasty we take a leap of 150 years through time, for the moment skipping over the 19th Dynasty, and land in the 20th Dynasty. We now find ourselves in the Ramesside Period, the time that feels most comfortable to egyptologists who specialise in Deir el-Medina Studies, because of its wealth of textual sources. We too shall gladly exploit the numerous mostly documentary texts that are now at our disposal. They provide useful insight into the administrative practices of the 20th Dynasty as well as prosopographical data, which will allow us to interpret ostraca inscribed with identity marks from the 20th Dynasty. These ostraca will be the focus of this chapter and the next, but Ramesside identity marks are found in many other contexts, some of which we shall consult in our endeavors to understand and contextualise 20th Dynasty ostraca with marks. Among the corpus of ostraca with marks from this period we find several useful anchor points that enable us to date and comprehend to a great extent the other ostraca from the same time. For this reason it is no longer necessary to calculate degrees of association for each ostracon. The current chapter deals with one specific category of ostraca with marks exclusively: ostraca that record the *wrš* duty roster. Translations of these ostraca are found in Appendix III.

3.2 CHRONOLOGICAL OVERVIEW

3.2.1 Introduction

One specific category of ostraca inscribed with marks from the 20th Dynasty is of paramount importance to this study: the group of ostraca that record *wrš* duty rosters and deliveries. This duty roster happens to be very well known from hieratic sources as well. We shall see that the administration recorded in hieratic overlaps to some extent with the administration kept by means of marks: there are several instances in which ostraca with marks record information for a particular period, often one month, which is also recorded in hieratic documentation. Through comparison of the two types of record, the ostraca with marks are comprehensible to a high degree. Several duty rosters composed with marks are inscribed with dates and provide important chronological data. The earliest duty rosters with marks occur in the second half of the reign of Ramesses III, while the latest ostraca of this type are attributed to the reign of Ramesses V.

3.2.2 The *wrš* duty rosters composed with marks

Numerous hieratic documents from the end of the 19th Dynasty,[1] but particularly from the beginning of the 20th Dynasty, attest to a duty roster in which the necropolis workmen were enrolled. The workmen were scheduled for duty according to a rotating system, often referred to in egyptological literature as the turnus. This schedule listed the participating workmen in a fixed sequence with a different workman for each day. After the last workman in the sequence had performed his duty, the turnus would begin anew with the workman at the head of the sequence. The purport of the *wrš*[2] duty roster is alluded to in a few hieratic documents, and

[1] For the duty roster of the 19th Dynasty, see Mark Collier, *Dating Late XIXth Dynasty Ostraca*. EU 28 (Leiden 2004), 95-111; Ben Haring, 'Between Administrative Writing and Work Practice. Marks Ostraca and the Roster of Day Duties of the Royal Necropolis Workmen in the New Kingdom' in: Budka, Kammerzell and Rzepka (eds.), *Non-Textual Marking Systems* (forthcoming) [4]; chapter 5, p. 456-457.

[2] *WB* I, 335.10: *wrš* "den Tag zubringen, wachen", 336.7: *wrš.y* "einer der den Tagesdienst hat".

the task seems to have comprised of awaiting the commodities and supplies brought to the community by members of the *smd.t* personnel, receiving the goods and sending them on.[3] According to a theory of Ben Haring the duty roster of the 20th Dynasty existed not solely as system that organised the transfer of deliveries, but functioned more generally as a memnonic device. This idea will be explored below in section 3.4.

Hieratic duty rosters from the time of Ramesses III and Ramesses IV are almost exclusively concerned with the *wrš* duties of members of the right side of the crew.[4] During the last years of the reign of Ramesses III the turnus consisted of 19 workmen, while under Ramesses IV the number was increased to include 30 workmen.[5] The duty rosters are rather well understood because of the many 20th Dynasty hieratic journal texts that record the turnus. These documents, often covering an entire month, list calendar dates followed by the workmen on duty, and the deliveries made on that particular day. At the end of the reign of Ramesses III and the beginning of the reign of Ramesses IV such documents were regularly composed, perhaps on a monthly basis.[6] Texts that record the duty roster oftentimes include a date line, but even when it is not mentioned they can usually still be dated because a specific combination of day number and a workman, as well as the individuals mentioned in the records provide unambiguous indications of the recorded months.[7]

Thanks to the insight of McDowell[8] and Haring[9] it has become apparent that the duty rosters that record deliveries are not only documented in hieratic, but also on ostraca with marks. A key piece in the first steps towards the decipherment of the duty ostraca composed with marks was ostracon O. Berlin P 12625.[10] Haring recognised the document as a duty roster in which day numbers were connected with workmen's marks. As the marks connected with day 1 to 6 were repeated for days 20 to 25 respectively, it was realised that the ostracon represented the 19 days turnus known from the reign of Ramesses III and comparing the marks to the names of workmen of this turnus, Haring proposed four possible dates for the ostracon. One of the dates was seen as the best fit,[11] and a later study of ostraca with marks that record the 30 days turnus of the reign of Ramesses IV was able to confirm this match.[12]

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[3] Jaroslav Černý, 'Datum des Todes Ramses' III. und der Thronbesteigung Ramses' IV' *ZÄS* 72 (1936), 115 and n. 2; Wolfgang Helck, 'Zur Geschichte der 19. und 20. Dynastie' *ZDMG* 105 (1955), 31-32; contra Louis-A. Christophe, 'Les enseignements de l'ostracon 148 de Déir el-Médineh' *BIFAO* 52 (1953), 113-128, who interpreted the daily deliveries as the personal rations of the workman on duty. Helck, 'Zur Geschichte', 32, noted furthermore that in O. DeM 56, a workman on *wrš* duty is witness to an oath of a doorkeeper. A similar instance is recorded on O. Ashmolean HO 143. The hearing of oaths can hardly be seen as part of the tasks of the men on duty, but appears to be merely a consequence of their presence at the *ḫtm n pꜣ ḫr*, the office in the vicinity of the village to which the deliveries were brought (see Günter Burkhard, 'Das *ḫtm n pꜣ ḫr* von Deir el-Medine. Seine Funktion und die Frage seiner Lokalisierung' in: Dorn and Hoffmann (eds.), *Living and Writing in Deir el-Medine*, 35-36), but also the location were many legal events took place, see Andrea G. McDowell, *Jurisdiction in the Workmen's Community of Deir el-Medîneh*. EU 5 (Leiden and Leuven 1990), 99.

[4] Manfred Gutgesell, *Die Datierung der Ostraka und Papyri aus Deir el-Medineh und ihre ökonomische Interpretation.* Teil I. *Die 20. Dynastie*. HÄB 18 (Hildesheim 1983), 68-69; contra Helck, 'Zur Geschichte', 32. There are a few ostraca that document the *wrš* duties of the left side of the crew, see Haring, 'Between Administrative Writing and Work Practice', [4]; see also below, 3.2.7.1; 3.3.16.

[5] Černý, 'Todes Ramses' III', 115-116; Gutgesell, *Die Datierung* I, 42.

[6] Janssen, 'Literacy and Letters', 91-94; Donker van Heel, 'Individual handwritings', 72-76.

[7] Cf. e.g. Gutgesell, *Die Datierung* I, 9.

[8] McDowell, *Hieratic Ostraca*, 4-5.

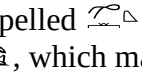
[9] Haring, 'Decoding the necropolis workmen's funny signs', 45-58.

[10] Accessible online via dem-online.gwi.uni-muenchen.de/fragment.php?id=303. Examination of unpublished ostraca with marks has resulted in the join between this piece and ONL 300, and further below O. Berlin P 12625 will be referred to together with the adjoining fragment as ONL 300+.

[11] Haring, 'Decoding the necropolis workmen's funny signs', 49-52.

[12] Haring and Soliman, 'Ostraca with workmen's marks', 81-82.

The duty roster ostraca composed with marks of the 20th Dynasty combine hieratic day numbers, workmen's marks, marks referring to members of the *smd.t* personnel, and signs for certain commodities in such a way that they can actually be 'read'.[13] For our current purposes the significance of these documents is twofold. First of all, they prove beyond any doubt that during the first half of the 20th Dynasty the necropolis workmen made use of identity marks for administrative purposes, just as their predecessors had done in the 18th Dynasty. Secondly, and more importantly, because this particular category of ostraca with marks is paralleled by well-known hieratic documents the ostraca with marks can be dated and provide the identity behind several workmen's marks. In fact, it will be shown that hieratic documents and ostraca with marks sometimes partially record the exact same information.

Before we analyse the duty roster ostraca composed with marks in more detail it is necessary to discuss how the messages encrypted in these documents came to be deciphered. In such ostraca each entry opens with the hieroglyphic sign  *s*, which is then followed by a hieratic numeral. It was first proposed by Černý that this combination was used to indicate the day number of the month, and as a consequence it seemed logical to interpret the *s* as an abbreviation for the word *sw*, meaning 'day'.[14] Remarkably, the hieratic numerals that are used are the common horizontal ones, and not, as one might expect, the vertical numerals used in dates.[15] A different sign altogether is used for the numeral 30.[16] This day number is designated with the hieratic sign  for  , the sitting man with a hand to the mouth. Most probably this sign is connected with the word *ḫrq* 'to complete',[17] which is employed in the hieratic administration of Deir el-Medina as a term for the last day of the month. The word is spelled  , but a related word *ḫrq*  'to abjure'[18] is written with the determinative  , which may perhaps explain the sign on the ostraca with marks.[19]

After the day number generally follows a mark, and it was McDowell who first published the idea that it referred to the workman on duty.[20] She noticed furthermore that some marks bore similarities to names of some of the workmen of the 20th Dynasty. Examining O. Glasgow D. 1925.80, a duty roster composed with marks, she considered the possibility that marks  and  connected with days 13 and 18 respectively represented the workmen with the names Kasa and Mose. The connection was established because the two identity marks are hieroglyphic signs with phonetic values used to write the names of these two workmen: with phonotic value *kꜣ* for *Ka*sa and with phonotic value *ms* for *Mose*. These identifications also made sense because in the hieratic duty rosters of years 25 to 27 of the reign of Ramesses III, both workmen were five slots apart as well.[21] In Haring's first detailed study of duty rosters written with marks, he developed McDowell's theory by

[13] Contra Megally, review of McDowell, *Hieratic Ostraca*, 279.

[14] Private letter send on to Rob Demarée, who kindly provided a copy. The interpretation was followed by McDowell, *Hieratic Ostraca*, 5 and 19 and Megally, review of McDowell, *Hieratic Ostraca*, 277-278 and confirmed by Haring, 'Decoding, *passim*. Cf. Haring, 'Workmen's Marks on Ostraca', 147; Haring and Soliman, 'Ostraca with workmen's marks', 83.

[15] Cf. Megally, *CdE* 73, 277; Haring, 'Decoding the necropolis workmen's funny signs', 45; Haring and Soliman, 'Ostraca with workmen's marks', 83.

[16] First noted by McDowell, *Hieratic Ostraca*, 19; also Haring, 'Decoding the necropolis workmen's funny signs', 45.

[17] *WB* I, 212.3.

[18] McDowell, *Jurisdiction*, 33-36.

[19] Cf. Haring and Soliman, 'Ostraca with workmen's marks', 83. Megally, review of McDowell, *Hieratic Ostraca*, 277 suggested the same connection between the sign and the word *ḫrq* but explained the sign itself rather as the sign used in that word.

[20] Contra previous objections by Megally, review of McDowell, *Hieratic Ostraca*, 280, who believed the marks referred to groups of persons because of the lack of the determinative  used for masculine names.

[21] McDowell, *Hieratic Ostraca*, 19.

scrutinising another roster with marks, the concave side of O. Berlin P 12625. There too the marks attributed to Kasa and Mose were separated by five days, to wit days 19 and 24. Moreover, the fact that Mose's mark was connected with a day 24 but also to a day 5 indicated to Haring that the ostracon dealt with the 19 days turnus known from the reign of Ramesses III. Going through the known hieratic documents that record this particular turnus, Haring found four possible dates on which Kasa served his *wrš* duty on a day 19 and Mose on a day 24: year 24, I *pr.t*; year 26, II *pr.t*; year 29, III *pr.t*; or year 31, IV *pr.t*. The latter option turned out to be the most plausible. Following McDowell's method Haring searched for connections between the names mentioned in the hieratic rosters and the marks on the Berlin ostracon, and found convincing matches besides those of Kasa and Mose. The mark on days 2 and 21  resembled the hieratic sign for *mnw*, which is an element in the name of the workman Nakht*min*, the man who served on exactly those days; mark  on days 6 and 25, a sign with the phonetic value *ḥr*, coincided with the name of *Hori* attested for the same days; and mark  , a hieroglyph with phonetic value *wsr*, found on day 26 corresponded to the name of *Weser*hat connected with the same day.

However, dating O. Berlin P 12625 to IV *pr.t* of year 31 of the reign of Ramesses III meant that mark  , the hieroglyph with phonetic value *kꜣ*, was not connected with the workman *Ka*sa, but with Penanuqet. Haring explained this by suggesting that although mark referred to the identity of Penanuqet, the mark itself was related to the name of *Ka*sa (v)/(vi), the father of Penanuqet (iii). It would thus seem that Penanuqet had inherited the mark from him when he took over his slot in the turnus list. Indeed, hieratic administrative documents demonstrate that Penanuqet was scheduled for duty a day after Neferhotep and a day before Khaemwaset from some point in year 30 onwards,[22] while in prior years this exact slot was filled by his father Kasa.[23] This theory also explained mark  (*mr*) connected with day 18 on O. Berlin P 12625, which according to a date in IV *pr.t* year 31 referred to a workman called Neferhotep (xii). The *mr* sign would then not be related to his name, but to that of his father *Mery*re (v), who had served on Neferhotep's exact position in the turnus before year 24, IV *pr.t*.[24]

With the proposed date of O. Berlin P 12625, Haring had thus tentatively identified workmen and their corresponding marks:[25]

Day 1 and 20		Khaemwaset
Day 2 and 21		Nakhtmin
Day 3 and 22		Reshupeteref
Day 4 and 23		Meryre
Day 5 and 24		Mose
Day 6 and 25		Hori
Day 18, [7] and 26		Weserhat
Day 19 [and 8]		Minkhau
Day 20 [and 9]		Iry-'a
[Day 21 and 10	-]	Harshire
Day 22 [and 11]		Iyerniutef
Day 23 and 12		Anynakht
Day 24 and 13		Neferher
Day 14		Amenemope

[22] First attested in IV *šmw* of year 31 in O. DeM 145.
[23] Haring, 'Decoding the necropolis workmen's funny signs', 49-51.
[24] See below 3.2.3.1, discussion of O. Ashmolean HO 1247 and O. Fitzwilliam EGA 6120.1943.
[25] Haring, 'Decoding the necropolis workmen's funny signs', table 1.

Day 15		Nesamun
Day 16		Nakhemmut
Day 17		Khaemnun
Day 18		Neferhotep
Day 19		Penanuqet

All these identifications were confirmed in a later study in which previously unknown ostraca with marks recording the 30 days turnus of the reign of Ramesses IV were brought into the picture.[26] In this longer turnus, each workman was on duty on the same day of the month throughout the year. The ostraca that record the 30 days turnus with marks are often rather fragmentary, but together[27] they allowed a reconstruction of the sequence of marks that reflected the duty roster of Ramesses IV, well known from the hieratic documents. These hieratic documents inform us that in the month of III *ꜣḫ.t* of the first year of the reign of Ramesses IV the longer turnus was introduced, as 11 new workmen of the right side of the crew were added. Apart from the increase in the number of workmen, hieratic ostraca demonstrate that a few changes took place in the order of the duty roster (see overview below). Firstly, the workman Nakhemmut was no longer included in the turnus of the reign of Ramesses IV, as he was promoted to foreman of the right side of the crew.[28] Secondly, workman Hori moved down in the sequence because his original slot was now occupied by a newly introduced workman called Pamedunakht, nicknamed Pasen. Hori's new position became the slot between that of Khaemnun and Neferhotep. The exact same changes are also observed in the reconstructed sequence of the 30 days turnus, as can be seen in the table below, which displays the duty roster of year 1 of Ramesses IV in the right column and the duty roster of O. Berlin P 12625 in the left column. The facts that the changes in the written turnus are reflected in the turnus with marks, and that not a single identification proposed for the 19 days turnus of year 31 is contradicted by the identifications of the 30 days turnus, prove that Haring's date for O. Berlin P 12625 was correct, and therefore his identifications as well.

Roster in O. Berlin 12625			Roster year 1 Ramesses IV		
Day 1 and 20		Khaemwaset	Day 30	Khaemwaset	
Day 2 and 21		Nakhtmin	Day 1	Nakhtmin	
Day 3 and 22		Reshupeteref	Day 2	Reshupeteref	
Day 4 and 23		Meryre	Day 3	Meryre	
Day 5 and 24		Mose	Day 4	Mose	
Day 6 and 25		Hori	Day 5	Pamedunakht	
Day 18, [7] and 26		Weserhat	Day 6	Weserhat	
Day 19 [and 8]		Minkhau	Day 7	Minkhau	
Day 20 [and 9]		Iry-'a	Day 8	Iry-'a	
[Day 21 and 10	-]	Harshire	Day 9	Amennakht	
Day 22 [and 11]		Iyerniutef	Day 10	Harshire	
Day 23 and 12		Anynakht	Day 11	Iyerniutef	
Day 24 and 13		Neferher	Day 12	Nebnakht	
Day 14		Amenemope	Day 13	Wesekhnemtet	
Day 15		Nesamun	Day 14	Pentaweret	

[26] Haring and Soliman, 'Ostraca with workmen's marks', 81-82.
[27] The ostraca used for the reconstruction are O. Ashmolean HO 1249, O. Turin N. 57393, O. Varille 425 and O. Ashmolean HO 1250. Together they cover all 30 days of the turnus and the workmen's marks connected with them. For these ostraca see below, 3.2.5.
[28] Collier, 'The right side', 6; 8.

Day 16		Nakhemmut
Day 17		Khaemnun
Day 18		Neferhotep
Day 19		Penanuqet

Day 15	Nakhemmut	
Day 16	Amennakht	
Day 17	Amennakht	
Day 18	Tasheri	
Day 19	Maaninakhtuf	
Day 20	Amenhotep	
Day 21	Bakenamun	
Day 22	Anynakht	
Day 23	Neferher	
Day 24	Amenemope	
Day 25	Nesamun	
Day 26	Khaemnun	
Day 27	Hori	
Day 28	Neferhotep	
Day 29	Penanuqet	

The right half of the overview above shows that the turnus of the reign of Ramesses IV contains three workmen with the name Amennakht. Several other names of the duty roster are rather common at Deir el-Medina, so a more precise identification is warranted. Conveniently, the filiations of the 30 workmen of the right side of the crew known from the turnus of the years of Ramesses IV were identified in a recent prosopographical study by Mark Collier. This was accomplished by analysing a number of hieratic sources[29] with ordered name lists of the workmen of the right side in which the fathers of the workmen are mentioned.[30] As a result, Collier was able to assign each workman in the turnus a unique identification number according to the system of Benedict Davies' seminal prospographical work.[31]

 Khaemwaset (iii)
 Nakhtmin (vi)
 Reshupeteref (i)
 Meryre (vi)
 Mose (iv)
 Pamedu(netjer)nakht (i), nicknamed "Pasen"
 Weserhat (ii)
 Minkhau (i)[32]
 Iry-'a, son of Khaemnun (i)[33]
 Amennakht (xxv)
 Harshire (i)
 Iyerniutef (iii)
 Nebnakht (iv)
 Wesekhnemtet (i)
 Pentaweret (iv)
 Nakhemmut (ii)
 Amennakht (xxvi), nicknamed "Sedet"

[29] Most importantly P. Turin Cat. 1891 rto. 6-13; P. Turin Cat. 2065 vso. II.1-12; O. DeM 41.
[30] Collier, 'The right side', 1-20.
[31] Davies, *Who's who*.
[32] The identification of Minkhau is uncertain and based on monumental inscriptions from Deir el-Medina, see Collier, 'The right side', 14.
[33] This individual is not mentioned in Davies, *Who's who*. Collier, 'The right side', 14-15 tentatively identified Iry-'a as the son of Khaemnun of the duty roster, i.e. Khaemnun (i); see below, p. 173, n. 36.

 Amennakht (ix), nicknamed “Kar”
 Ta (i), also called Tasheri
 Maaninakhtuf (iii)
 Amenhotep (vi)
 Bakenamun (i)[34]
 Anynakht (i)
 Neferher (vi)
 Amenemope (x)
 Nesamun (III)[35]
 Khaemnun (i)[36]
 Hori (ii) = (iii)[37]
 Neferhotep (xii)
 Penanuqet (iii)

With one exception, these prosoprographic data from the turnus of the reign of Ramesses IV aid in identifying the workmen on O. Berlin P 12625. The confirmed identifications prove that the suspicions of McDowell and Haring that some identity marks are connected with their proper names are correct. Moreover, Haring’s suggestion that the Penanuqet of the turnus with mark had inherited his mark from his father is now supported by the evidence that his father was Kasa (vi).[38] The connection between Neferhotep (xii) and his mark seems to be more complicated and will be discussed below.[39]

The only unidentified workman on O. Berlin P 12625 is the Nakhemmut attested for day 16, who is not to be confused with Nakhemmut (ii) of the 30 days turnus of the reign of Ramesses IV. The Nakhemmut who is still listed on O. Berlin P 12625 must be Nakhemmut (vi), a workman who disappears in the 30 days turnus, as he was promoted to the position of chief workman of the right side, apparently in II *ꜣḫ.t* of the first year of the reign of Ramesses IV.[40] This leads to the following observations: firstly, Nakhemmut (vi) was designated by the mark  . Secondly, when Nakhemmut (vi) left his slot in the turnus between Nesamun (III) and Khaemnun (i), his mark was taken over by another workman: Pamedunakht (i). This workman did not have any family ties to Nakhemmut (vi), and the sole reason that he received Nakhemmut (vi)’s mark seems to be that the mark had become available with his

[34] Tentatively identified, see Collier, ‘The right side’, 18.
[35] Not in Davies, *Who’s who*; see Collier, ‘The right side’, 9.
[36] The existence of several different individuals named Khaemnun has lead to quite some discussion as to their precise identification, see Davies, *Who’s who*, 250-252. Davies was of the opinion that the ‘Khaemnun, son of Amennakht’ recorded in P. Turin Cat. 1891 was a grandson of Khaemnun (i), husband of Naunakhte (i), see Davies, *Who’s who*, 251 and n. 615. However, Collier, ‘The right side’, 10 correctly pointed out that this is impossible: the Khaemnun recorded in the ordered list of the papyrus certainly is the same Khaemnun who is recorded for *wrš* duty on the right side of the crew throughout the reign of Ramesses III. He cannot be, as Davies assumed, a son of Amennakht (xxvi) because the latter workman was introduced to the right side of the crew at the beginning of the reign of Ramesses IV, i.e. several years after Khaemnun’s introduction. Regarding the identification of the Khaemnun in the duty roster, Collier was hesitant to identity him as Khaemnun (i), husband of Naunakhte (i). Yet, we have strong indications that it was indeed this Khaemnun (i) who was represented by mark and who served on the right side under Ramesses III and Ramesses IV. For one this is suggested by O. MMA 09.184.785, an ostracon discussed in Appendix I, § 12, which appears to record Khaemnun (i), his contemporary colleagues from the right side, his son Maaninakhtuf (iii) as well as his daughter Wasetnakht (i). Another clue is provided by O. Schaden 1 and O. BM 5634, discussed in the chapter 5, see p. 407.
[37] This man is probably identical with Hori (iii), see Collier, ‘Integrating Hieratic and Marks Data’, [9].
[38] Collier, ‘The right side’, 11-12.
[39] Below, p. 186; see also chapter 6, 6.5.4.3.
[40] Davies, *Who’s who*, 50 is correct in stating that the first attestation of Nakhemmut (vi) with his new title dates to year 2 of Ramesses IV, but his promotion certainly must have taken place a year earlier, see Collier, ‘The right side’, 6; 8.

advancement in rank and subsequent exit from the turnus. Pamedunakht in turn was the first of the group of new workmen to be added to the new duty roster. Indeed, of all new workmen Pamedunakht's position is the highest, being scheduled for duty on day 5. We will later return to the question why Nakhemmut (vi) did not keep his own identity mark.[41]

Currently, some 15 years after Haring's initial study, a great number of unpublished duty rosters composed with marks have come to light, which confirm the original ideas of McDowell and Haring and further elucidate the practice of composing duty rosters with marks. Moreover, it is now clear that several ostraca fragments join together. In addition we shall see that some of these newly accessed ostraca are inscribed with a year number, rendering the task of dating the roster considerably easier. It is because of these ostraca with year numbers as well as the fact that the ostraca with marks are so akin to hieratic duty rosters that we find ourselves in the comfortable position of observing that duty rosters composed with marks can often be dated down to the month. Even when a year number is absent that is in many cases possible on account of the combination of specific day numbers and specific workmen's marks. Prior to a discussion of the exact date of duty rosters composed with marks, the sections below present an overview of the different elements found in such documents. It will be seen later on that the interpretation of these elements is often based on close comparison to hieratic accounts that record the same information.

3.2.2.1 Regnal year numbers

In about a dozen cases, the hieratic or rather cursive hieroglyphic sign or group  for *rnp.t* and *rnp.t-sp*, accompanied by a hieratic numeral is inscribed above the duty roster. The number obviously refers to the regnal year to which the duty roster dates. It is always added just above or before the first day of the month. This day is not always preserved, so it is well possible that more ostraca were originally headed by a year number. On the other hand, there are several ostraca where a day 1 is preserved and a year number was not added.[42] A regnal year number is attested from the reign of Ramesses III, year 20 to the reign of Ramesses IV, year 4, but most instances date to the end of the reign of Ramesses III, as can be seen in the overview below.[43]

O. Fitzwilliam EGA 6120.1943	Year 20
O. Strasbourg H 45	Year 27
ONL 322+	Year 28, II *šmw*
ONL 320	Year [29], III *ꜣḫ.t*[44]
ONL 337	Year 29, I *pr.t*
ONL 297	Year 30
ONL 6222	Year 30, IV *šmw*
ONL 333+	Year 30, I *pr.t*
ONL 336+	Year 30, III *ꜣḫ.t*
ONL 325	Year 32, II *šmw*
O. Ashmolean HO 1249	Year [2][45]
ONL 310	Year 2

[41] See below, p. 198; 3.2.7.4; also chapter 6, p. 518.

[42] O. Ashmolean HO 1081; O. Ashmolean HO 1082; O. Ashmolean HO 1088; ONL 298; ONL 300; ONL 317; ONL 321; ONL 340; ONL 6236; ONL 6237; O. Glasgow D. 1925.80; and O. Strasbourg H 10. Also in ONL 338, which records the first day of a new year. Perhaps also ONL 341, but the top of the ostracon is damaged.

[43] A year date seems to have been inscribed at the top of O. Glasgow 1925.80, which is here attributed to the reign of Ramesses V. Unfortunately the year number has not been preserved.

[44] The ostracon is damaged at the spot where the numeral should have been added, but the document can be attributed to regnal year 29.

O. Ashmolean HO 1250 Year 4

3.2.2.2 Month designations

In about two dozens of the duty rosters composed with marks, a sign is added that seems to denote the specific month of which the documents speaks. A month designation frequently occurs together with a regnal year number,[46] but not necessarily so. The sign is in most cases written in connection with the first day of the month, but on O. Glasgow D. 1925.67 and O. UC 31967 the marks are clearly added to other days as a means to prevent ambiguity about the date of specific entries. The following month signs are well identifiable:

[47]		*ḏḥwty*	I *ꜣḫ.t*
[48]		*ḥw.t-ḥr*	III *ꜣḫ.t*
[49]		*kꜣ-ḥr-kꜣ*	IV *ꜣḫ.t*
[50]		*tꜣ-ʿḥ.t*	I *pr.t*
[51]		*pꜣ ḫn.w mw.t*	I *pr.t*
[52]		*pꜣ-n(y)-ỉmn-ḥtp*	III *pr.t*
[53]	idem		
[54]		(*pꜣ-n(y)-*)*rnnw.t.t*	IV *pr.t*
[55]		*pꜣ-n(y)-ỉn.t*	II *šmw*
[56]	idem		

Most designations are in fact references to the festivals of gods and processions that took place during these months. Perhaps the most straightforward example of a sign denoting a festival is in O. Ashmolean HO 1247, which most probably refers to the "beautiful feast of the valley". The sign is inscribed after day 24 and marks the beginning of the festival, since in year 6 of the reign of Seti II, the second day of the festival took place on II *šmw*, day 25.[57] In this light, the sign in the designation of IV *ꜣḫ.t* may be interpreted as actual vessels that were delivered to the workmen on occasion of festivals. Indeed, administrative documents make reference to so-called "*kꜣ-ḥr-kꜣ*-vessels" that were supposedly used in rituals.[58] Similarly, the jar-shaped sign that appears to be a month designator in ONL 297 and ONL

[45] The ostracon is damaged at the spot where the numeral should have been added, but the document can be attributed to regnal year 2.
[46] ONL 297; ONL 310; ONL 320 (?); ONL 324 (month designation very uncertain); ONL 325; ONL 333; ONL 336; ONL 337; O. Fitzwilliam EGA 6120.1943.
[47] ONL 338.
[48] ONL 336; O. Ashmolean H 1091; O. Cairo JE 96328; O. Fitzwilliam EGA 6120.1943 (?); ONL 320 (?).
[49] ONL 298; ONL 321; O. Ashmolean HO 1082.
[50] ONL 333, ONL 337; O. Glasgow D. 1925.67.
[51] O. Ashmolean H 1082. The identification seems plausible but is not corroborated by other sources.
[52] O. Ashmolean HO 1088. The identification seems plausible but is not corroborated by other sources.
[53] O. UC 31967. The identification seems plausible but is not corroborated by other sources.
[54] ONL 316; ONL 340; O. Cairo SR 12165.
[55] ONL 325; O. Strasbourg H 10.
[56] O. Ashmolean HO 1247.
[57] Heidi Jauhiainen, *"Do not celebrate your feast without your neighbours". A study of references to feasts and festivals in non-literary documents from Ramesside Period Deir el-Medina.* PIAAS 10 (Helsinki 2009), 151.
[58] Jauhiainen, *"Do not celebrate"*, 116-117.

310, both recording the month *ipip*  , the third month of *šmw*, could be related to the distribution of goods during a festival of this month.[59]

We briefly mention here an unexplained sign at the top of ONL 322+ adjacent to the year date. It is in this position that one would expect a sign referring to a month or festival, but the odd combination of lines on this ostracon is difficult to explain as such. The ostracon records II *šmw*, for which sign  was employed, but the sign or rather drawing on ONL 322+ does not resemble this bark and remains therefore enigmatic.

ONL 6523 could be referring to the epagomenal days, the *ḥr.y.w rnp.t*,[60] but the document is difficult to interpret. The ostracon cannot be accurately dated as it does not display any workmen's marks. We do encounter other marks and signs that are common on duty rosters composed with marks, such as  for day 30. Above that sign, the hieratic signs *ḥ* and *rnp.t* could be an abbreviation for the *ḥr.y.w rnp.t*. If the signs do indeed refer to the epagomenal days on that ostracon, the duty roster below it most probably refers to the first month of the year, I *ꜣḫ.t*, which in turn would date the ostracon in year 24 of Ramesses III.

3.2.2.3 Designations for commodities

Like their hieratic counterparts, the duty rosters composed with marks record for each day the deliveries transferred by the *smd.t* personnel to the community of workmen. These provisions are conveyed by marks and their quantities in hieratic numerals. Whereas a small amount of infrequently attested marks for commodities remain difficult to explain, the most important commodities are readily identifiable through comparison with duty rosters recorded in hieratic. The following products are designated by marks:

Sign	Origin	Meaning
	resembles a jar	*ds* '*ds* beer jar'
	resembles a date	*bnr* 'date'
	resembles a plant	*sm.w* 'vegetables'
	hieratic sign *pr* used in spelling of '*psn* bread'	*psn* '*psn* bread'
 or	resembles hieratic sign *b*	*bỉ.t* '*bỉ.t* bread'
	resembles hieratic sign *ḫt*	*ḫt* '(fire)wood'
	resembles hieratic sign *rm*	*rm.w* 'fish'

Besides these products, the duty rosters composed with marks commonly employ other signs to further specify the accounts in a manner that is well known from hieratic administration. Most frequently are two marks that indicate whether a specific delivery was destined for the right or for the left side of the crew. A third sign was used to document deficits of commodities.

Sign	Origin	Meaning
	hieratic sign used in spelling of *wnmy* 'right'	*wnmy* 'right side'
	unknown[61]	*smḥy* 'left side'
	hieratic sign *ḏꜣ*	*wḏꜣ.t* 'deficit'

[59] Perhaps the festival of Taweret, at the occasion of which commodities were distributed to the workmen, see Jauhiainen, *"Do not celebrate"*, 154-155.
[60] *WB* II, 430, 3.
[61] See chapter 6, 6.5.4.7.

3.2.2.4 Identity marks for members of the *smd.t* personnel

The duty rosters composed with marks are similar to hieratic duty rosters in yet another respect. In both types of documents, individuals responsible for the delivery of a certain commodity are often recorded. In ostraca with marks this was achieved by the notation of an identity mark that referred to the member of the *smd.t* personnel in question, almost always either a woodcutter or a fisherman. Aside from a few still problematic marks which may or may not refer to members of the *smd.t* crew, the following men are securely identified:

Ptahmose, woodcutter	 [62]
Pades, woodcutter	 [63] and [64]
Amenhotep, woodcutter	 [65]
Bakenkhonsu, woodcutter	 and [66]
Wesermaat(re)nakht, woodcutter	 [67]
Hatnefer (son of Penpakhenty), fisherman	 [68] and [69]

Three instances of Amenkha[70] are attested. In two of these, a filiation seems to have been added, most likely in order to distinguish between two contemporaneous men with the name Amenkha:

Amenkha (son of Amenemone), fisherman	 [71]
Amenkha (son of Khonsumose), fisherman	 [72]
Amenkha	 [73]

There are in fact more signs that could refer to members of the *smd.t* personnel. Some of them are identifiable even though evidence is lacking, while others remain unclear.

 [74]	sign *s*, perhaps voor *S*ary (woodcutter)
 [75]	hieratic signs *p* and *ḥ*, perhaps for Pen*p*a*kh*enty (fisherman)
 [76]	sign *ḥr*, apparently for a deliverer of wood, perhaps also of fish

[62] Very frequently attested. Earliest dated attestation in the reign of Ramesses III, year 30, III *ꜣḫ.t* (ONL 336+). Latest attestation in the reign of Ramesses V or later.
[63] O. Turin N. 57393; perhaps also ONL 340; O. Ashmolean HO 1083.
[64] ONL 316; ONL 310; O. Varille 425; O. UC 31967; O. Ashmolean HO 1088; O. Ashmolean HO 1082; O. Ashmolean HO 1083.
[65] O. Leiden F. 2000 / 1.5.
[66] Very frequently attested. Earliest dated attestation probably reign of Ramesses III, year 25, IV *pr.t* (ONL 332). Latest attestation in the reign of Ramesses V or later.
[67] ONL 297; ONL 325; O. Strasbourg H 13.
[68] O. Fitzwilliam EGA 6120.1943; ONL 298.
[69] O. Ashmolean HO 1247.
[70] Kathrin Gabler, who is currently completing a dissertation on the topic of the *smd.t* personnel, kindly informs us of the existence of a fisherman named Amenkha, son of Khonsumose; another fisherman is Amenkha, son of Amenemope, while a third contemporaneous Amenkha is the woodcutter who might have been a son of water-carrier Qenna. According to Gabler, the fisherman Amenkha and the woodcutter Amenkha cannot be the same person.
[71] O. Fitzwilliam EGA 6120.1943.
[72] ONL 317.
[73] ONL 316; perhaps O. Ashmolean HO 1247.
[74] The sign appears only on ONL 336+, assumedly for a woodcutter, making Sary a plausible candidate.
[75] At least on ONL 300+ securely attested with a delivery of fish. Also attested on O. Glasgow D. 1925.67; ONL 6236+; ONL 318 and perhaps on O. Ashmolean HO 1088 and O. Fitzwilliam EGA 6120.1943.

 [77] perhaps sign *šs*, apparently for a deliverer of fish, perhaps also wood
 [78] sign *nfr*, perhaps for a deliverer of several commodities
 [79] sign *ḥ*, apparently for a deliverer of wood

3.2.2.5 Dating duty rosters composed with marks

Since duty rosters written with workmen's marks are relatively well datable, they constitute important anchor points in regard to other ostraca with workmen's marks. In the following sections we will examine the duty rosters with marks solely with the purpose of dating them.[80] The hieratic administration in which the turnus is preserved will be essential in this process. Although the information concerning the turnus obtained from the available hieratic documents does not cover every single month from year 24 of Ramesses III onwards, the turnus has been reconstructed to a large extent, most recently and completely in an online publication by Rob Demarée (hereafter referred to as 'the reconstructed turnus'),[81] in which the workmen on duty are presented in tables for each month from year 24 of Ramesses III to year 2 of Ramesses IV. It will become apparent that the ostraca with marks will often confirm the reconstruction, while at other points they offer evidence for changes in the turnus that are not recorded in the hieratic material.

3.2.3 Duty rosters composed with marks dating to the reign of Ramesses III

It has already been established that ONL 300+ records months III and IV of *pr.t* in year 31. A regnal year 32 is recorded on ONL 318+, a very large ostracon which seems to have covered at least three months. Let us begin reading at a well legible part of the ostracon below the year number. For days 20, 21, 22, 23, 24, 25, 27, 28 and 29 we encounter the marks  ,  ,  , ,  ,  ,  ,  and  , which we had identified on ONL 300+ as the workmen Meryre, Mose, Hori, Weserhat, Minkhau, Iry-'a, Iyerniutef, Anynakht and Neferher respectively. We recognise mark  on day 26 as the mark for Harshire, found in the 30-days turnus of Ramesses IV. Clearly these identity marks appear in the same consecutive order as in ONL 300+. It can thus be concluded that according to ONL 318+, Meryre was on duty on a day 20 somewhere in year 32 of Ramesses III. Looking at the reconstructed turnus of the same year, we observe that this happened either in II *šmw* or in I *ꜣḫ.t*. Deliveries for the former month are listed in hieratic ostracon O. DeM 38. Comparing this ostracon to ONL 318+ we immediately realise that the very same information is recorded in both documents: the entries for day 22 (with Hori on duty) and day 26 (with Harshire on duty) are almost perfect matches:

	O. DeM 38	ONL 318+
Day 22: Hori	dates: 1 right; ***ds*** **jars: 2; vegetables: 4**	***ds*** **jars: 2; vegetables: 4**
Day 26: Harshire	***psn*** **bread: 20;** ***bỉ.t*** **bread 12;** ***ds*** **jars: 2; vegetables**: 10	***psn*** **bread: 20;** ***bỉ.t*** **bread 12;** ***ds*** **jars: 2; vegetables**: 6

Apart from a discrepancy in the number of units of vegetables for day 26, the ostraca mention the same figures and therefore suggest that like O. DeM 36, ONL 318+ documents II *šmw* of

[76] O. Fitzwilliam EGA 6120.1943; ONL 6237+. Attested four times.
[77] O. Ashmolean HO 1247; O. Fitzwilliam EGA 6120.1943, both predating year 24 of Ramesses III.
[78] O. Ashmeolean HO 1093; O. Ashmolean HO 1082; ONL 317+; O. Ashmolean HO 1247. Perhaps this sign is rather a quality marker, although indications of quality of dates, bread, beer, wood and fish are not known from hieratic delivery texts.
[79] ONL 337.
[80] The content of duty rosters composed with marks shall be discussed below, 3.3.
[81] Accessible in the *Deir el-Medina Database*. Partially based on Helck, 'Zur Geschichte'.

year 32. There is more evidence for this assumption when we examine the section on ONL 318+ just above the year number, where the entries for a day 19 and 20 are inscribed. Logic would demand that these entries belong to the previous month, I *šmw*, and this is confirmed by the identity mark connected with day 19. It is  , the mark of Iyerniutef, who according to the reconstructed turnus would have been on duty on exactly this day in I *šmw*. No workman's mark seems to have been added for day 20, but the deliveries of the day are well discernable: mark  in this entry refers to the woodcutter Ptahmose and the numeral 550 to the amount of firewood delivered by him on this day. The entry then continues with the woodcutter Wesermaatrenakht represented by mark  , who delivered 870 units of wood. As it happens, the deliveries of I *šmw*, day 20 are also recorded in hieratic ostracon O. DeM 153, and the very same wood deliveries are mentioned there. The correspondence with O. DeM 153 proves that ONL 318+ is datable to I and II *šmw* of year 32 in the reign of Ramesses III.

ONL 322+ is inscribed with regnal year 28. On this ostracon days 1 and 2 do not seem to have been recorded, but for day 3 the mark  is listed. We now know this mark to refer to Neferher, and a quick glance at the reconstructed turnus informs us that in year 28 of Ramesses III Neferher was scheduled for duty on day 3 of II *šmw*. Therefore ONL 322+ can straightforwardly be dated to this month, even though we do not possess a hieratic parallel of the duty roster of this period.[82] That cannot be said for O Strasbourg H 45, where regnal year 27 is preserved. The first line is badly damaged, but the next lines clearly list the marks of Kasa, Khaemwaset, Nakhtmin and Reshupeteref for days 2 – 6. According to the reconstructed turnus, these workmen were on duty on these days in III *šmw* and II *ꜣḫ.t*. Unfortunately, no hieratic duty roster is preserved for the former month. Hieratic ostraca O. Alan Gardiner 102, O. DeM 633 and O. DeM 167 record deliveries attributed to II *ꜣḫ.t*,[83] but both this group of hieratic ostraca and O. Strasbourg H 45 are not well enough preserved to allow for a sufficient comparison, and there seem to be no matching entries. Therefore O. Strasbourg H 45 is securely dated in year 27, but it remains uncertain whether the deliveries of which it speaks are those of III *šmw* or II *ꜣḫ.t*.

Through the dating of ONL 322+ and O. Strasbourg H 45 we have come to know three new marks:

 (O. Strasbourg H 45, day 8; ONL 322+, day 15)
 (O. Strasbourg H 45, day 11; ONL 322+, day 18)
 (O. Strasbourg H 11, day 13)

With the help of the hieratic turnus lists we can identify these marks as respectively the workmen Menna, Pentaweret and Qenna. Menna is most likely identifiable as the workmen and/or draughtsman Menna (i).[84] The Pentaweret referred to in these documents through mark is to be distinguished from Pentaweret (iv) with mark  in the 30 days turnus of Ramesses IV. Several other individuals of the same name are attested at Deir el-Medina, so the identification of this person is not uncomplicated. Very little is known about the

[82] No hieratic sources recording deliveries for this particular month seem to be available. O IFAO 1306 was attributed to this month in Wolfgang Helck, *Die datierten und datierbaren Ostraka, Papyri und Graffiti von Deir el-Medineh. Bearbeitet von A. Schlott.* ÄA 63 (Wiesbaden 2002), 291-292, but none of the deliveries listed in that piece conform to ONL 322+. Therefore it is probable that the II *šmw* mentioned in O. IFAO 1306 should date to a year other than 28.

[83] Helck, *Die datierten und datierbaren Ostraka*, 285.

[84] Davies, *Who's who*, 163-164. The correspondence between Menna and this mark had already been proposed by Haring, 'Decoding the necropolis workmen's funny signs', 53.

draughtsman Pentaweret (vi).[85] The Pentaweret (viii) identified by Davies is not likely to have been active in the reign of Ramesses III.[86] That is also true for his Pentaweret (x)[87] and Pentaweret (xi).[88] Skipping over the Pentawerets who are attested as scribes, the most plausible candidates for the identification of the Pentaweret in the turnus of Ramesses III are Pentaweret (i),[89] Pentaweret (vii)[90] and Pentaweret (ix).[91] As will be demonstrated later, Pentaweret (vii), son of Nebnefer (vii) is the most probable identification.[92] The Qenna with mark  is most likely Qenna (i), and it is not difficult to imagine that he had inherited his mark from his father *Ini*herkhau (ii).

O. Strasbourg H 45 (day 6) and ONL 322+ (day 12) furthermore indicate that Reshupeteref, whose mark we had already identified, is also represented in a more elaborate way by the mark  .[93] Moreover, we see that in years 27 and 28 the marks  (ONL 322+, day 5),  (ONL 322+, day 6) and  (ONL 322+, day 9; O. Strasbourg H 45, day 2) were not used for Nesamun, Minkhau and Penanuqet, but for the workmen who previously filled their positions in the turnus: Irsu,[94] Huynefer[95] and Kasa.[96] As discussed above, the latter workman is Kasa (v)/(vi), the father of Penanuqet (iii).

Not much is known about the workman Irsu, who is not discussed in Davies' *Who's who*.[97] The workman Huynefer is in all likelihood Huynefer (xi) = (v).[98]

Another ostracon, ONL 337, is inscribed with regnal year 29 and displays mark  of Khaemnun. As the reconstructed turnus lists indicate, in year 29 of Ramesses III Khaemnun only served his *wrš* duty on a day 1 in I *pr.t*. With a single exception, all other marks in ONL 337 are in accord with the reconstructed turnus for that month, and so it can be safely dated to that time. The only mark that disagrees is that of Harshire, who is listed for day 30 in ONL 337, while the reconstructed turnus proposes this position had been assumed by Iyerniutef. In the reconstructed turnus it was assumed that Iyerniutef was replaced by Harshire in IV *šmw* of year 30, and that he remained absent until he returned again in I *pr.t* of the same year. This scenario seems somewhat odd, and the duty rosters written with marks demonstrate that the

[85] Davies, *Who's who*, 169. A contemporaneous draughtsman with the same name is Pentaweret (iv). Could they be identical?
[86] Davies, *Who's who*, 241-242.
[87] Davies, *Who's who*, 54.
[88] Davies, *Who's who*, 111.
[89] Davies, *Who's who*, 70; 111.
[90] Davies, *Who's who*, 228.
[91] Davies, *Who's who*, 214.
[92] See chapter 4, 4.2.11. Note that in the opinion of Collier, none of the workmen called Pentaweret distinguished by Davies fits the description of the man of that name who is recorded in the hieratic duty rosters. Collier therefore proposed to existence of a Pentaweret (XII), see Collier, 'Integrating Hieratic and Marks Data', [13 and n. 44].
[93] Reshupeteref (i) was tentatively identified as the son of Hesysunebef (i) by Davies, *Who's who*, 248. If this identification is correct, it would seem plausible that Reshupeteref (i)'s mark is connected with the name of Hesysunebef (i)'s father Neferhotep (ii).
[94] Not in Davies, *Who's who*. The first attestation of Nesamun in the slot of Irsu seems to be on IV *šmw*, year 28 according to O. DeM 138, but compare O. DeM 156. See also Collier, 'Integrating Hieratic and Marks Data', [3 and n. 9, 4 and n. 10].
[95] Based on hieratic documents alone, the reconstructed turnus lists in the *Deir el-Medina Database* give the impression that Minkhau took over the slot of Nakhemmut, but it will be shown below that it was the slot of Huynefer that was later occupied by Minkhau. The first secure attestation of Minkhau in the turnus is II *šmw*, year 31 according to O. DeM 154. Apart from Huynefer's slot, Minkhau apparently also took over Huynefer's identity mark. The two men may well have been related, see chapter 5, Excursus IV.
[96] The first attestation of Penanuqet in the slot of Kasa is I *šmw*, year 29 according to P. Turin Cat. 1880 rto. IV, cf. Collier, 'Integrating Hieratic and Marks Data', [4 and n. 16].
[97] Compare Collier, 'Integrating Hieratic and Marks Data', [4] and n. 12.
[98] Davies, *Who's who*, 18-19; Collier, 'Integrating Hieratic and Marks Data', [8-9; 17]. Huynefer (xi) may be the same man as Huynefer (v), see chapter 5, Excursus IV.

changes that did indeed take place in the turnus need to be reconstructed somewhat differently. Although Harshire did fill in the position of Iyerniutef as indicated by ONL 337, Iyerniutef did not depart from the turnus.

The alterations that took place in the turnus can be observed in ONL 297+. This informative ostracon carries a regnal year 30 on the reverse and records Nakhemmut for day 1 just below it. In the reconstructed turnus lists for year 30 we find Nakhemmut on day 1 in III *šmw* and II *ꜣḫ.t*, but we can securely date the reverse of the ostracon to the former month through comparison with hieratic ostracon O. DeM 646. Although this account does not contain a duty roster, it does document deliveries of III *šmw*. The amounts mentioned in the hieratic records correspond to a great extent to those in ONL 297+, as shown in the table below.

Ramesses III, year 30, III *šmw* – ONL 297+ and O. DeM 646													
	Workman	Wood	Delivered by	Deficit	Fish	Delivered by	Deficit	Dates	*ds* / *qb* jars	*bi.t* bread	*psn* bread	vegetables	Additional
Day 1	Nakhemmut	-	-	-	-	-	-	-	2	-	-	2	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
Day 2	Harshire	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
Day 3	Iyerniutef	-	-	-	-	-	-	-	2	6	10	-	-
Day 3[99]	-	440 480	● ●	-	-	-	-	-	-	6	10	-	-
Day 4	Hori	160	-	-	-	-	-	-	-	-	-	-	-
Day 4	-	150	●	-	-	-	-	-	-	-	-	-	-
Day 5	Pentaweret	160	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
Day 6	Anynakht	160	●	-	-	-	-	-	8	-	-	-	-
Day 6	-	160	●	-	-	-	-	-	-	-	-	-	-

TABLE 19. COMPARISON OF ENTRIES ON ONL 297+ (TOP ROWS) AND O. DEM 646 (BOTTOM ROWS)

Examining the marks on ONL 297+, we notice that after the day of Nakhemmut it is not the mark of Iyerniutef that follows on day 2, as the reconstructed turnus suggests, but that of Harshire. This sequence is in accordance with that of the duty roster of the previous year as recorded in ONL 337. After the mark of Harshire, we find for days 3 to 6 the marks of Iyerniutef, Hori, Pentaweret and Qenna respectively. The same sequence is partially preserved on the obverse of ONL 297+ for days 13, 14 and 15, which pertain to the duty roster of the previous month II *šmw*. Hence, the ostracon informs us that instead of Iyerniutef it was Qenna who left the turnus. In the reconstructed turnus list it was assumed that this Qenna lastly performed his *wrš* duty in III *ꜣḫ.t* of year 31, but the duty rosters composed with marks reveal that his exit took place at least 16 months earlier.[100] The following amendations can thus be made for the duty roster of III *šmw*, year 30:[101]

	Reconstructed turnus	**ONL 297+**
Day 1	Nakhemmut	Nakhemmut
Day 2	Iyerniutef	**Harshire**
Day 3	Pentaweret	**Iyerniutef**

[99] In this and in other tables, underlining represents sections of an ostracon that were inscribed in red ink.
[100] Cf. Collier, 'Integrating Hieratic and Marks Data', [5].
[101] Cf. Collier, 'Integrating Hieratic and Marks Data', [6].

Day 4	Hori	Hori
Day 5	Qenna	**Pentaweret**
Day 6	Anynakht	Anynakht
Day 7	Neferher	Neferher
Day 8	Meryre	Meryre
Day 9	Nesamun	Nesamun
Day 10	Huynefer	Huynefer
Day 11	Khaemnun	Khaemnun
Day 12	Neferhotep	[Neferhotep]
Day 13	Penanuqet	Penanuqet
Day 14	Khaemwaset	Khaemwaset
Day 15	Nakhtmin	Nakhtmin

TABLE 20. FIRST 15 DAYS OF THE DUTY ROSTER OF YEAR 30, III *šmw*

The date of this new sequence is confirmed by a very small ostracon, ONL 6222, inscribed with regnal year 30. It records only days 29 and 30 and lists as the workmen on duty Harshire and Iyerniutef respectively. Harshire was on duty on a day 29 in the year 30 in IV *šmw* as well as III *ꜣḫ.t*, but ONL 6222 most likely dates to the former month. We are able to determine this on account of another ostracon with marks, ONL 336+, which is inscribed with a year 30 as well, it covers days 29 and 30, which must date to III *ꜣḫ.t* of that year. This is suggested by sign 𓉔 written in front of the regnal year, which can only be an allusion to Hathor, the name of that month. Almost all days of this month are preserved on the ostracon, and the document indicates that several shifts had taken place in the turnus. Amenemope and Meryre had changed positions, while Hori had moved up three slots to take the position of Nakhemmut, who moved down in the sequence to the position of Huynefer, who in turn had ascended to the slot of Hori.[102] However, we shall see below that there are indications that by this time Huynefer had been replaced in the turnus by Minkhau.[103] In summary, the duty roster for III *ꜣḫ.t* of year 30 thus looked like this:

	Reconstructed turnus	**ONL 336+**
Day 1	Neferhotep	Neferhotep
Day 2	Penanuqet	Penanuqet
Day 3	Khaemwaset	Khaemwaset
Day 4	Nakhtmin	Nakhtmin
Day 5	Reshupeteref	Reshupeteref
Day 6	Amenemope	**Meryre**
Day 7	Mose	Mose
Day 8	Menna	Menna
Day 9	Nakhemmut	**Hori**
Day 10	Harshire	Harshire
Day 11	Pentaweret	**Iyerniutef**
Day 12	Hori	**Huynefer / Minkhau**
Day 13	Qenna	**[Pentaweret]**
Day 14	Anynakht	[Anynakht]
Day 15	Neferher	[Neferher]
Day 16	Meryre	**Amenemope**
Day 17	Nesamun	Nesamun

[102] Cf. Collier, 'Integrating Hieratic and Marks Data', [9].
[103] See below, p. 192.

Day 18	Huynefer	**Nakhemmut**
Day 19	Khaemnun	Khaemnun
Day 20	Neferhotep	Neferhotep
Day 21	Penanuqet	Penanuqet
Day 22	Khaemwaset	Khaemwaset
Day 23	Nakhtmin	Nakhtmin
Day 24	Reshupeteref	Reshupeteref
Day 25	Amenemope	**Meryre**
Day 26	Mose	Mose
Day 27	Menna	Menna
Day 28	Nakhemmut	**Hori**
Day 29	Harshire	Harshire
Day 30	Pentaweret	**Iyerniutef**

TABLE 21. DUTY ROSTER OF YEAR 30, III *ꜣḫ.t*

It appears that the 30th year of the reign of Ramesses III was an eventful one in regard to the duty rosters. A few individuals were excluded from the *wrš* duty system to be replaced by others,[104] and several remaining workmen changed their relative position in the turnus. Among other ostraca, to be discussed below, this is demonstrated by ONL 331+. The duty roster on the obverse is conveniently headed by a regnal year 30. The workmen's marks for days 1 to 5 below it are  ,  ,  ,  and , belonging to Nakhtmin, Reshupeteref, Meryre, Mose, and Menna. A glance at the reconstructed turnus lists of year 30 informs us that Nakhtmin's duty only fell on a day 1 in I *pr.t*, but lists for the first five days of the month Nakhtmin, Reshupeteref, *Amenemope*, Mose, and Menna. The discrepancy for day 3 is of course to be explained in the light of the change in the turnus we had just highlighted on ONL 336+: Amenemope and Meryre changed their positions. We can thus securely attribute ONL 331+ to I *pr.t* of year 30. A first change that took place in respect to the roster of III *ꜣḫ.t* of year 30 concerns the slot after Menna. No longer do we find  , the mark of Hori in this position, but the mark  belonging to Huynefer or his later substitute Minkhau. In turn, the mark of Hori is found on day 9, in the previous position of either Huynefer or Minkhau,[105] indicating that they swapped their places in the turnus. Continuing down to day 10 we encounter  , the mark of Khaemnun, in the position occupied by Pentaweret in III *ꜣḫ.t* according to ONL 336+. This Pentaweret seems to have been excluded from the turnus from this moment onwards. In his stead, Khaemnun performed his duties, but Khaemnun did not change his original position. In fact, the mark of Khaemnun reoccurs only 6 days later for day 16! It would thus seem that he substituted for Pentaweret only on this particular day. We will return to this replacement at a later point.[106] For now, an amended presentation of the turnus of year 30, I *pr.t* will suffice:

	Reconstructed turnus	**ONL 331+**
Day 1	Nakhtmin	Nakhtmin
Day 2	Reshupeteref	Reshupeteref
Day 3	Amenemope	**Meryre**
Day 4	Mose	Mose
Day 5	Menna	Menna
Day 6	Nakhemmut	**Huynefer / Minkhau**

[104] On this matter see Collier, 'Integrating Hieratic and Marks Data'.
[105] It is likely that at this time Huynefer had already been replaced by Minkhau, see below, p. 192.
[106] See the discussion of ONL 340, below, p. 194-195.

Day 7	Harshire	Harshire
Day 8	Iyerniutef	Iyerniutef
Day 9	Hori	Hori
Day 10	Qenna	**Khaemnun [SIC]**
Day 11	Anynakht	Anynakht
Day 12	Neferher	Neferher
Day 13	Meryre	**Amenemope**
Day 14	Nesamun	Nesamun
Day 15	Huynefer	**Nakhemmut**
Day 16	Khaemnun	Khaemnun
Day 17	Neferhotep	[Neferhotep]
Day 18	Penanuqet	[Penanuqet]
Day 19	Khaemwaset	Khaemwaset
Day 20	Nakhtmin	Nakhtmin
Day 21	Reshupeteref	Reshupeteref
Day 22	Amenemope	**Meryre**
Day 23	Mose	Mose
Day 24	Menna	Menna
Day 25	Nakhemmut	**[Huynefer / Minkhau]**
Day 26	Harshire	[Harshire]
Day 27	Iyerniutef	[Iyerniutef]
Day 28	Hori	[Hori]
Day 29	Qenna	**[Khaemnun / Iry-ʿa]**
Day 30	Anynakht	[Anynakht]

TABLE 22. DUTY ROSTER OF YEAR 30, I *pr.t*

3.2.3.1 Duty rosters of years 20, 24 and 25

Also inscribed with a regnal year number is O. Fitzwilliam EGA 6120.1943. Interestingly, the ostracon appears to deal with year 20[107] of the reign of Ramesses III and dates therefore to the period from which we possess very few duty rosters.[108] Significantly, marks  ,  , and 

[107] The regnal year is written in red ink and left of the numeral 20 a red smudge is visible. It is therefore conceivable that an additional sign, perhaps even a numeral was originally inscribed, but it seems that the scribe intentionally erased it afterwards.

[108] The only published example of a 20th Dynasty hieratic duty roster that might predate year 24 of Ramesses III appears to be O. DeM 253, reportedly dating to III *pr.t* of year 15 (discovered like so many other duty rosters from the 20th Dynasty in the Kom Sud). The sign group for 'year' and the numeral immediately following it are, however, damaged and Černý noted that the year number could also be '25', see Černý, *Ostraca hiératiques* IV, pl. 4. Helck, 'Zur Geschichte', 33, argued that the ostracon records a duty roster of year 15, because the names of Qenymin (incorrectly read as Qenamun) and Hay on the reverse are not attested in duty rosters from later periods. Yet, it is not at all clear if the ostracon is a duty roster in the first place. The obverse of this fragmentary ostracon records some days of work and inactivity, and mention is made of the *wrš* duty, whereas the reverse seems to contain names exclusively. Helck's statement that Qenymin and Hay do not appear in duty rosters is valid, and the reason for this is that they almost certainly belonged to the left side of the crew: Qenymin, probably Qenymin (i) (perhaps identical to Qenymin (ii), see Davies, *Who's who*, 186) is securely attested on the left side in a list from the beginning of the reign of Ramesses IV on O. DeM 831. The Hay in O. DeM 253 may well be one of the two Hays in the same list – Hay (iii) = (v) and Hay (xi) – who are both already attested on the left side in year 23 on O. Turin N. 57026. Although it is uncertain if the reverse of O. DeM 253 records a duty roster, there is some merit to this interpretation if one situates it in III *pr.t* of year 25 instead of year 15. The first mentioned day on the obverse is day 12, which corresponds to the *wrš* duty in that month of Kasa, the first recorded name on the reverse. The following name Kha-[…] may be reconstructed as Khaemwaset, the man on duty after Kasa in the turnus of year 25. The damaged bit after his name, followed by that of Reshupeteref would then agree with the *wrš* of days 14 and 15. Compare similar objections against a date in year 15 presented by

listed on the obverse of this ostracon for days 1, 2 and 6 are repeated on the reverse for days 19, 20 and 24 (TABLE 23). This means that the duty roster presented here follows a turnus of 18 days. This shorter turnus is also preserved in O. Ashmolean HO 1247, which does not have a year date.[109] Both this duty roster and the one preserved in O. Fitzwilliam EGA 6120.1943 are only partially preserved, but they each fill in gaps left in the other documents. Indeed the sequences of identity marks preserved in the two ostraca agree, except for day 11 in O. Ashmolean HO 1247, which displays a pentagram-shaped mark  , whereas O. Fitzwilliam EGA 6120.1943 seems to list the mark  of Iry-ʿa for this slot. The interpretation of the later mark is not secured, and the sign could also be the mark  of Khaemnun. It is conceivable that the confusion between these two marks – rather similar in shape – was in fact experienced by the Egyptian scribe. We may speculate that the scribe failed to distinguish between the mark of Iry-ʿa and Khaemnun because in at least two occasions Iry-ʿa substituted for Khaemnun.[110] Moreover, it has been suggested by Mark Collier that Iry-ʿa was a son of Khaemnun.[111] In any case, the star is not likely to be a variant form of as both marks are attested within the same document elsewhere.[112] This discrepancy in the duty roster of O. Ashmolean HO 1247 and O. Fitzwilliam EGA 6120.1943 thus indicates that a change in the turnus must have taken place in the period between these two documents. Without any hieratic administration to rely on it is very difficult to date O. Ashmolean HO 1247 any more precisely than to the time before year 24 of Ramesses III.

Additionally, we cannot be completely certain if we can identify the workmen with the marks we have already associated with workmen known later from hieratic duty rosters. Apart from two marks, all identity marks in O. Ashmolean HO 1247 and O. Fitzwilliam EGA 6120.1943 are known from later duty rosters composed with marks. The different marks are  recorded for day 4 on O. Fitzwilliam EGA 6120.1943 and recorded for day 22 on O. Ashmolean HO 1247. The former mark is an allomorph of mark  which we have already associated with Pentaweret. This will become clear later on, when other securely dated ostraca from the time of year 24 onwards will be discussed. In contrast, the pentagram is not attested in the 19 days turnus.

The hieratic duty rosters of years 24 and 25, which record this turnus are informative also in another way. Month III *pr.t* of year 24 is recorded on O. DeM 173, and lists a Meryre on day 15 in a slot preceding that of Kasa. Five months later, in IV *šmw* of year 25, a

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Gutgesell, *Die Datierung* I, 55-57. Helck, 'Zur Geschichte', 32-33, proprosed furthermore that O. DeM 339 contains an early reference to a *wrš* duty but the date of this ostracon is unknown. Helck dated the record in year 22, but his calculations were based on a turnus of 19 days, while we shall see in this section that there is evidence of an 18 days turnus before year 24. Helck's interpretation of O. Varille 36 as a duty roster in year 18 for the right and left side (Helck, *Die datierten und datierbaren Ostraka*, 237) is likewise dubious. This document does not make any mention of the *wrš* duty, and the division into a right and left side is probably incorrect. The continuous lines are perhaps better read as Huynefer *son of* Hori and Amenhotep *son of* Pentaweret. These men are Huynefer (x) and Amenhotep (vii) who were active in the second half of the 20th Dynasty, indicating the ostracon should date to reign of Ramesses IX or less likely the reign of Ramesses XI.

[109] Cf. Haring and Soliman, 'Ostraca with workmen's marks', 78-80.

[110] As pointed in Collier, 'The right side', 14-15; Haring and Soliman, 'Ostraca with workmen's marks', 79. The first supposed substitution is recorded on O. DeM 180 and concerns day 9 of IV *ꜣḫ.t*. The ostracon is undated, but for day 10 of the same month Meryre is listed on duty. Meryre only served on IV *ꜣḫ.t*, day 10 in regnal year 24 and year 31 of Ramesses III. O. DeM 180 was attributed to year 24 by Helck, *Die datierten und datierbaren Ostraka*, 259, a date which must be correct as a date in year 31 is difficult. In that year, the slot of Meryre was preceded by that of Reshupeteref, as is attested in hieratic documents as well as in ONL 321+, a duty roster composed with marks, to be discussed below, p. 195. The second attested substitution took place on IV *šmw* of year 28 and is securely dated through O. DeM 138.

[111] Collier, 'The right side', 14-15.

[112] On ostraca which date to periods earlier and later than the period covered by the turnus lists: O. Berlin P 14231, O. IFAO C 7638, ONL 6226, ONL 6232, ONL 6275, ONL 6290, and ONL 6585. Contra Haring and Soliman, 'Ostraca with workmen's marks', 79.

Neferhotep is attested for this slot on day 30. This must be the Neferhotep (xii) we have identified as the workman behind mark  , and whom we have seen in the position preceding that of Kasa in e.g. ONL 322+. Neferhotep (xii) therefore replaced a Meryre in the duty roster somewhere between year 24 III *pr.t* (O. DeM 173) and year 25 IV *šmw* (O. DeM 32). This Meryre, attested in the duty rosters of year 24 III *pr.t* and earlier months, could well be the grandfather of Neferhotep (xii), Meryre (v). That would explain the origin of , the mark formed by the hieroglyphic sign for *mr* used to designate Neferhotep (xii). Since O. Ashmolean HO 1247 and O. Fitzwilliam EGA 6120.1943 predate year 24, mark , found preceding that of Kasa, refers on both pieces most likely to Meryre (v) rather than to Neferhotep (xii). The mark preceding in O. Ashmolean HO 1247 and O. Fitzwilliam EGA 6120.1943 is  , which we have attributed to another workman by the name of Meryre, Meryre (vi). However, it is unlikely that this Meryre (vi) is recorded in the 18 days turnus, because he was not included in the duty roster system yet. Hieratic sources indicate that Meryre (vi) entered the duty roster in II *ꜣḫ.t* of year 27, where he is recorded in the slot between Neferher and Irsu,[113] and not earlier. To make things a bit confusing, this slot between Neferher and Irsu was originally occupied by another workman named Neferhotep. He cannot be Neferhotep (xii), the owner of mark , because both Neferhotep (xii) and the Neferhotep who was replaced by Meryre (vi) are attested together in the hieratic duty roster of II *pr.t*, year 25.[114] Instead, this Neferhotep is probably Neferhotep (xi), which would mean that he was replaced by his son Meryre (vi), who then took over his mark . Although it would perhaps have been more logical for Meryre (vi) to take on the mark , he was apparently not able to do so because his brother, Neferhotep (xii), had already taken on this identity mark. In conclusion, it is this Neferhotep (xi) who is refered to by mark in O. Ashmolean HO 1247 and O. Fitzwilliam EGA 6120.1943.

The only workman in the duty rosters of year 24 whom we have not identified in ostraca with identity marks is Khaemope. This Khaemope is only attested in the duty roster of year 24, III *pr.t*[115] and his slot in the turnus, just before that of Reshupeteref, was taken over by Nakhtmin no later than IV *šmw* of the same year.[116] In O. Ashmolean HO 1247, the slot just before that of Reshupeteref is on day 9, where we find the mark  assigned to Nakhtmin. Since the latter workman is not yet listed in the duty rosters of year 24, mark on O. Ashmolean HO 1247 probably refers to Khaemope, suggesting that at some point after year 24, III *pr.t* Nakhtmin appropriated both Khaemope's slot in the turnus as well as his identity mark. Collier problematised such a reconstruction by pointing out that Nakhtmin is already recorded as a member of the right side before this time in years 22 and 24 of the reign of Ramesses III.[117] One would be inclined to counter this argument by postulating that Nakhtmin may indeed have already been a workman of that side, but did not yet participate in the turnus of *wrš* duties. This would however mean that the total number of workmen on the left side was greater than the number of men recorded in the duty roster, which is impossible because two distribution texts from year 24 allude to a total of exactly 19 men for each side.[118] Perhaps Nakhtmin was by this time associated with the right side, but as a young men and not a full workman.[119] In this capacity he may have been recorded in the ostraca from year 22 and 24, but not in the distribution ostraca that recorded only the full members of the crew. Even more puzzling is Collier's observation that Khaemope seems to be attested on the left side

[113] O. DeM 167.
[114] O. Glasgow D.1925.67.
[115] O. DeM 173, day 18.
[116] O. DeM 32, day 20.
[117] O. Turin N. 57047 and O. Turin N. 57026. See Collier, 'Integrating Hieratic and Marks Data', [14-15, n. 51].
[118] O. DeM 647 and O. Ashmolean HO 291. See Gutgesell, *Die Datierung* I, 71.
[119] He is not yet recorded at the end of the 19th Dynasty, see Collier, *Dating Late XIXth Dynasty Ostraca*, 138.

during years 20 and 24 of Ramesses III.[120] Both Collier and Davies struggled with the identification of this man.[121] We may hypothesise that he was a homonymous colleague of the Khaemope who worked on the right side. Alternatively the ostraca from year 20 and 24 may refer to the woodcutter Khaemope (viii).[122] Some support for the idea that the Khaemope on the left side is another man than the Khaemope on *wrš* duty in year 24, III *pr.t* comes in the form of the attestation of a Khaemope on the right side of the crew from the end of the 19th Dynasty. This man was either Khaemope (iii) or Khaemope (iv).[123] The latter candidate is very interesting, because this Khaemope was a son of a man named Nakhtmin.[124] This Nakhtmin could have been Nakhtmin (iv), grandfather of Nakhtmin (vi), and we may propose that he too possessed the identity mark 𓏏,[125] which was first transferred to his son Khaemope (iv), as is suggested by the duty roster composed with marks on O. Ashmolean HO 1247 and the hieratic duty roster on O. DeM 173. In turn, Khaemope was replaced in the turnus by the grandson of Nakhtmin (iv), Nakhtmin (vi), who continued to be represented by mark 𓏏.

Khaemwaset is not securely identified in the turnus until year 25, IV *šmw*, day 19.[126] It is therefore theoretically possible that before that time, his position in the turnus was filled by someone else. This could have been his father, Penamun (iii) = (iv),[127] as is suggested by hieratic ostracon O. DeM 406, securely dated to year 15 of Ramesses III. The document is an account of the distribution of wicks to workmen, all of whom appear to belong to the right side of the crew. Importantly, the workmen seem to be listed in an ordered sequence[128] that is headed by the foreman of the right side, Khonsu. Not every workman mentioned in this account is clearly related to the duty rosters of year 24. For example, the men Amenkha and Khnummose are not attested in the hieratic turnus documents, and they may have disappeared from the right side or from the entire crew somewhere before year 24. Still, the sequence of workmen recorded in O. DeM 406 is informative for our purposes. We find that the fourth workman listed there is Neferhotep, who is then followed by Meryre, Kasa and Penamun. In O. Ashmolean HO 1247, we find the marks assigned to the first three workmen in exactly the same relative positions, followed by the mark of Khaemwaset. Even though hard evidence is lacking, it is very plausible that, in analogy to O. DeM 406, the mark 𓏏 in O. Ashmolean HO 1247 does not represent Khaemwaset (iii), as it would in later documents, but his father Penamun (iv) = (iii). O. DeM 406 might hold a clue as to the identity of the workmen represented by mark ⛧ in O. Ashmolean HO 1247 as well. On this hieratic ostracon, the workmen Huynefer and Telmontu are listed before Neferhotep. On O. Ashmolean HO 1247 the slot just before Neferhotep is connected with the pentagram ⛧. The position just before that mark is preserved in O. Fitzwilliam EGA 6120.1943, which displays the mark 𓏏 of Huynefer. If O. Ashmolean HO 1247 originally listed the mark of Huynefer for the same

[120] O. Turin N. 57432, O. Turin N. 57047 and O. Turin N. 57026. See Collier, 'Integrating Hieratic and Marks Data', [14-15, n. 51].
[121] Davies, *Who's* who, 249-250; Collier, 'Integrating Hieratic and Marks Data', [14-15, n. 51].
[122] Davies, *Who's who*, 250; the woodcutter Khaemope (viii) is attested in year 24 of Ramesses III in O. DeM 146. See also Jac. J. Janssen, 'The Woodcutters' in: Jac. J. Janssen, Elizabeth Frood and Maren Goecke-Bauer, *Woodcutters, Potters and Doorkeepers. Service Personnel of the Deir el-Medina Workmen.* EU 17 (Leiden 2003), 22.
[123] Collier, *Dating Late XIXth Dynasty Ostraca*, 136.
[124] Davies, *Who's who*, 249, n. 594.
[125] This assumption will be confirmed by evidence from the 19th Dynasty, see chapter 5, p. 404; chapter 6, 6.5.4.2 and CHART 10.
[126] O. DeM 32.
[127] For the equivalency of Penamun (iii) and Penamun (iv), see Collier, *Dating Late XIXth Dynasty Ostraca*, 142 and *passim*.
[128] For lists of this kind see chapter 4, 4.1.

relative position, then mark  could well refer to Telmontu.[129] However, as there is no way of determining to what extent O. DeM 406 and O. Ashmolean HO 1247 record the same workmen, the identification remains highly tentative. Moreover, it remains uncertain whether Telmontu actually belongs to the right side, since he is associated with the left side as early as year 23.[130] The table below summarises the information contained in O. Fitzwilliam EGA 6120.1943, O. Ashmolean HO 1247 and O. DeM 406.

Year 20 O. Fitzwilliam EGA 6120.1943			**O. Ashmolean HO 1247**			**Year 15 O. DeM 406**
Days 1, 19		Menna				
Days 2, 20		Nakhemmut				
Day 3		Iyerniutef				
Day 4		Pentaweret				
Day 5		Hori	Day 17		Hori	
Days 6, 24		Anynakht	Day 18		Anynakht	
Day 7		Neferher				
Day 8		Irsu				
Day 9		Huynefer				Huynefer
Day 10	 /	Khaemnun / Iry-‘a	Day 11		?	Telmontu
Day 29		Neferhotep	Day 23		Neferhotep	Neferhotep
Day 30		Meryre	Days 6, 24		Meryre	Meryre
			Days 7, 25		Kasa	Kasa
			Day 8		Penamun / Khaemwaset	Penamun
			Day 9		Khaemope ?	
			Day 10		Reshupeteref	Reshupeteref
		[Amenemope]			[Amenemope]	Amenemope
Day 18		Mose				Mose

TABLE 23. COMPARISON OF ORDERED LISTS FROM RAMESSES III YEAR 15 – YEAR 20

The position in the turnus preceding that of Mose is probably attributable to Amenemope. This is suggested by the list of year 15 preserved in O. DeM 406, as well as by the list of O. Turin N. 57432, a document attributed to year 20 where Amenemope is mentioned as belonging to the right side.[131] This would be in accord with the first secured

[129] This man may be Telmontu (i) who appears to have been active during the late 19th Dynasty and the reign of Ramesses III, see Davies, *Who's who*, 276-277. Indeed, this man served on the right side of the crew during the last years of the reign of Siptah, see Collier, *Dating Late XIXth Dynasty Ostraca*, 145. It is perhaps noteworthy that in O. IFAO 384 a Telmontu appears to be on *wrš* duty on a day 16 in I *ꜣḫ.t*. Černý tentatively read the regnal year at the beginning of the ostracon as "year 1", and the piece has therefore been attributed to the reign of Ramesses V by Helck, *Die datierten und datierbaren Ostraka*, 426, 427. If the year number is in fact much greater than 1, a date before year 24 of Ramesses III may be considered.

[130] In year 23 (O. Turin N. 57026) and 24 (O. Turin N. 57039; O. Turin N. 57056).

[131] According to Helck's interpretation of another piece, O. Varille 36, Amenemope was scheduled for *wrš* duty for the left side in year 18, see Helck, *Die datierten und datierbaren Ostraka*, 237; but no mention of either a right or left side is made in the hieratic text, see *KRI* VII, 287. Likewise, Helck, *Die datierten und datierbaren Ostraka*, 249 read an Amenemope for the left side in O. Turin N. 57026, which dates to year 23, but in the transcription of the piece the name is given as Amenemone (although in the facsimile his name is severely damaged), see López, *Ostraca Ieratici N. 57001-57092*, pl. 15-15a. The reading of Amenemone is the more probable one, as this individual is well attested as a workman of the left side in year 24, see O. Turin N. 57046, O. Turin N. 57056 and O. Turin N. 57028.

attestation of Amenemope in a duty roster, O. DeM 654,[132] which positions Amenemope in the slot before that of Mose, as in O. DeM 406.

We are thus able to interpret the duty roster of O. Ashmolean HO 1247 quite well, but it is still difficult to attribute a date to it. Apart from O. DeM 406 there are no hieratic documents which provide useful information about the workmen in O. Ashmolean HO 1247. Hieratic sources from year 20 onwards do not offer enough insights either. Khaemnun, Khaemope and Menna are all recorded as workmen of the left side in the list O. Turin N. 57432, attributed to II *pr.t* of year 20 by Helck.[133] No regnal year number is mentioned, however, so this hieratic account might actually be older than O. Fitzwilliam EGA 6120.1943 and O. Ashmolean HO 1247, in which the three workmen are most likely members of the right side. One of these workmen, Khaemope, is still – or rather, again – attested on the left side in regnal year 23 or 24,[134] but Nakhtmin had already joined the right side in this document. If Khaemope and Nakhtmin were indeed represented by the same identity mark in the turnus, we are not able to detect the entry of Nakhtmin and the exit of Khaemope in the duty rosters composed with marks and so this hieratic document does not aid us in dating O. Fitzwilliam EGA 6120.1943 and O. Ashmolean HO 1247. The position of Khaemnun on either the right or the left side throughout the reign of Ramesses III is not very informative either for dating purposes. O. Fitzwilliam EGA 6120.1943 and O. Ashmolean HO 1247 appear to list Khaemnun in the turnus of the right side of the crew. This assumption is only corroborated by hieratic accounts of absence, such as O. Turin N. 57432 (year 20 or earlier), O. Turin N. 57026 (year 23 or 24), O. Turin N. 57039 (year 24), O. Turin N. 57029 (year 24) in which this workman is mentioned as a member of the right side.[135] In summary, the sequence of the workmen in O. Ashmolean HO 1247 is clearly associated with that found in O. Fitzwilliam EGA 6120.1943 and O. DeM 406, but it cannot be dated any more precisely than to a time before year 24 of Ramesses III.

Circumstances are much more favourable in regard to duty rosters composed with marks that contain the 19 days turnus. So far we have dated such pieces by means of the regnal year that headed the documents, but when a year number is lacking, we are oftentimes able to attribute a date. A clear example is O. Glasgow D. 1925.67, which is also inscribed with lines of hieratic. Both McDowell and Haring already proposed that the information concealed in the marks corresponds to the hieratic account in the same document dealing with II *pr.t* of year 25.[136] Indeed, we can now confirm that, as McDowell and Haring suspected, marks  and  connected with days 9 and 10 do belong to Mose and Menna. According to the reconstructed turnus lists, these two workmen were on *wrš* duty on days 9 and 10 in year 27, I *šmw* and III *pr.t*, year 28, III *pr.t*, year 30, IV *pr.t*, but also in year 25, II *pr.t*. Two lines above day 9, a day 20 is mentioned, but no identity mark is connected with it. Immediately above this entry, the sign that refers to the month I *pr.t* is inscribed. It is thus plausible that the entry for day 20 belongs to that very month, and that the following days 9 and 10 belong to the subsequent month of II *pr.t*. The fact that it is again Mose who served his *wrš* duty on day 20 of I *pr.t* supports such an interpretation. If, in turn, days 9 and 10 belong to II *pr.t*, the duty roster can only be that of year 25, exactly the year of which the hieratic account speaks.

The duty roster of ONL 312 must date to II *ꜣḫ.t* of the same year. This is suggested by the sequence of identity marks, and by the match between this document and hieratic ostracon

[132] Undated but most likely attributable to III *šmw* year 24, cf. Demarée in the *Deir el-Medina Database*.
[133] Helck, *Die datierten und datierbaren Ostraka*, 241-242.
[134] O. Turin N. 57026.
[135] Helck, *Die datierten und datierbaren Ostraka*, 253, observed the name of Khaemnun on the left side in year 24 in O. Turin N. 57046, but this must be an incorrect reading of Khaemope, cf. *Ostraca Ieratici N. 57001-57092*, pls. 29-29a and *KRI* V, 491.
[136] McDowell, *Hieratic Ostraca*, 5; Haring, 'Decoding the necropolis workmen's funny signs', 53.

O. UC 39626. In both ostraca, a delivery is recorded for day 28 of 20 units of *psn* bread and 16 units of *bỉ.t* bread. ONL 332 contains a duty roster for IV *pr.t* of year 25 and I *šmw* of year 26. This can be determined by the sequence of workmen's marks, as well as matching entries in hieratic ostracon O. DeM 169+ for days 22, 16, 17 and 18.

3.2.3.2 Duty rosters of years 26 and 27

We can date three other ostraca to year 26 of Ramesses III. The first one is ONL 447+. The particular sequence of workmen in this ostracon corresponds to the duty rosters of III *šmw* and II *ꜣḫ.t* of year 24 and IV *šmw* and III *ꜣḫ.t* of year 26. It is to the latter year that we should attribute ONL 447+, on the basis of corresponding figures in the deliveries for day 19 and day 21 in hieratic ostracon O. DeM 654, which dates to that exact month. In this duty roster composed with marks we come across another version of the mark of Pentaweret connected with day 4. Other than  and  , mark  refers to this workman as well. The last two allomorphs are also attested for Pentaweret in the other two ostraca with marks that date to year 26. The first one, ONL 317+, is securely associated with IV *ꜣḫ.t* of that year on the basis of the sequence of workmen, as well as hieratic parallels for the deliveries of days 4, 6 – 8, 12 – 13 and 22 in O. DeM 142 and O. Berlin P 12629. The second ostracon is O. Ashmolean HO 1086, which is dated to IV *pr.t* of year 26 on account of corresponding entries for days 20 and 30 in hieratic ostracon O. Turin N. 57153 that mentions the very same month.

As discussed on p. 179, O. Strasbourg H 45 dates to III *šmw* or II *ꜣḫ.t* of year 27.

3.2.3.3 Duty rosters of year 28

Moving on to regnal year 28, there are two duty rosters composed with marks, which we can safely place on our timelime. ONL 338+ records the end of IV *šmw* and the beginning of I *ꜣḫ.t* of year 28 as the hieratic parallels for the fourth and fifth epagomenal days preserved in O. DeM 427+ demonstrate. The reverse of ONL 333+ is not straightforwardly datable, but can be attributed to a specific month if we suggest some more adjustments to the reconstructed turnus lists. This is necessary because the sequence of identity marks preserved in ONL 333+ rev., presented in the right column of the table below, is nowhere attested in (reconstructed) turnus lists or in the two ostraca with marks that predate year 24 of Ramesses III. The sequence of ONL 333+ rev. is very similar to that of the partially preserved duty rosters of year 25, III *pr.t*, year 27, IV *pr.t* and year 28, IV *pr.t*, presented here in the left column of the table below. But there are differences as well. In this sequence, the position of Qenna follows immediately after that of Hori, whereas in ONL 333+ rev., this slot is filled by Anynakht. In contrast, it is this very same Anynakht who in the turnus of years 25, 27 and 28 follows after Qenna. Frustratingly, the position after Anynakht is not preserved in ONL 333+ rev. In this piece, we can assume, however, that Qenna had disappeared from the duty roster. As indicated by ONL 297+, discussed above, Qenna was indeed no longer listed in the duty rosters from III *šmw* of year 30 onwards. ONL 333+ rev. would then indicate that his exclusion from the duty rosters took place at an even earlier point. Qenna is still securely dated in hieratic ostracon O. DeM 156 for day 2 of IV *šmw* of year 28.[137] Therefore, we can only attribute ONL 333+ rev. to IV *pr.t* of year 28.

	Turnus as preserved and reconstructed for year 25, III *pr.t*, year 27, IV *pr.t* and year 28, IV *pr.t*	**ONL 333+ rev.**
Day 19	Nakhemmut	Nakhemmut

[137] Cf. Collier, 'Integrating Hieratic and Marks Data', [5].

Day 20	Iyerniutef	Iyerniutef
Day 21	Pentaweret	Pentaweret
Day 22	Hori	Hori
Day 23	Qenna	**Anynakht**
Day 24	Anynakht	**?**
Day 25	Neferher	Neferher
Day 26	Neferhotep / Meryre	Meryre
Day 27	Nesamun	Nesamun
Day 28	Huynefer	Huynefer

TABLE 24. DUTY ROSTER OF ONL 333+

3.2.3.4 Duty rosters of year 29

Apart from ONL 337 (see 3.2.3) and ONL 320 (see 3.2.2.1) another ostracon, ONL 330+, dates to year 29. The sequence of workmen's marks does not completely correspond to any of the duty rosters in the reconstructed turnus, but it is very close to that of year 24, II *ꜣḫ.t*, year 26, III *ꜣḫ.t*, year 27, I *ꜣḫ.t* and year 29, IV *ꜣḫ.t*. The difference between the order of workmen in these reconstructed lists is the mention of Iyerniutef on day 22 immediately after the position of Nakhemmut, while in ONL 330+ the mark of Harshire is listed for this particular slot. It has already been demonstrated above that in year 30 Harshire took over the position of Iyerniutef in the turnus.[138] Yet, Iyerniutef is still attested in the position after that of Nakhemmut in year 27, IV *pr.t*[139] as well as in year 28, IV *pr.t*.[140] It follows that ONL 330+ can only date to year 29, IV *ꜣḫ.t*, and that the reconstructed turnus needs to be amended:

	Reconstructed turnus	**ONL 330+**
Day 9	Meryre	Meryre
Day 10	Nesamun	Nesamun
Day 11	Huynefer	Huynefer
Day 12	Khaemnun	Khaemnun
Day 13	Neferhotep	Neferhotep
Day 14	Kasa	Kasa
Day 15	Khaemwaset	Khaemwaset
Day 16	Nakhtmin	[Nakhtmin]
Day 17	Reshupeteref	Reshupeteref
Day 18	Amenemope	Amenemope
Day 19	Mose	Mose
Day 20	Menna	Menna
Day 21	Nakhemmut	Nakhemmut
Day 22	Iyerniutef	**Harshire**

TABLE 25. DUTY ROSTER OF YEAR 29, IV *ꜣḫ.t*

3.2.3.5 Duty rosters of year 30

Several duty rosters composed with workmen's marks are to be placed in year 30. We have already seen that ONL 333+ obv. and ONL 6222 date to the year.[141] O. Ashmolean HO 1084 records IV *šmw* of the same year, and its duty roster is thus one month later than that of ONL 297+. As we deduced from the latter piece (TABLE 20) as well as from ONL 336+ (TABLE 21), during year 30 numerous shifts took place in the turnus that are not recorded in the surviving

[138] According to ONL 297+.
[139] Hieratic ostracon O. DeM 34.
[140] ONL 333+, a duty roster composed with marks discussed above, 3.2.3.2.
[141] See above, p. 174-175 and n. 50; p. 182.

hieratic documentation. O. Ashmolean HO 1084 is situated between these two records, and reflects the same changes. In this ostracon we are able to observe that on day 18 of IV *šmw*, year 30 Nakhemmut took over the position of Huynefer for the first time. As a consequence, Nakhemmut is listed once on day 18, in his new position, as well as on day 9, in his old position.[142] Collier has interpreted this change as probable evidence for Huynefer's exit from the turnus and the introduction of Minkhau.[143] Although this cannot be proven, such a reconstruction would make sense. This would mean that from year 30, IV *šmw* onwards, mark ☥ referred in the turnus to Minkhau.

	Reconstructed turnus	**O. Ashmolean HO 1084**
Day 1	Neferhotep	[Neferhotep]
Day 2	Penanuqet	[Penanuqet]
Day 3	Khaemwaset	Khaemwaset
Day 4	Nakhtmin	Nakhtmin
Day 5	Reshupeteref	Reshupeteref
Day 6	Amenemope	Amenemope
Day 7	Mose	Mose
Day 8	Menna	Menna
Day 9	Nakhemmut	Nakhemmut
Day 10	Harshire	Harshire
Day 11	Pentaweret	**Iyerniutef**
Day 12	Hori	Hori
Day 13	Qenna	**[Pentaweret]**
Day 14	Anynakht	Anynakht
Day 15	Neferher	Neferher
Day 16	Meryre	Meryre
Day 17	Nesamun	Nesamun
Day 18	Huynefer	**Nakhemmut**
Day 19	Khaemnun	Khaemnun
Day 20	Neferhotep	Neferhotep
Day 21	Penanuqet	[Penanuqet]
Day 22	Khaemwaset	[Khaemwaset]
Day 23	Nakhtmin	Nakhtmin
Day 24	Reshupeteref	[Reshupeteref]
Day 25	Amenemope	[Amenemope]
Day 26	Mose	[Mose]
Day 27	Menna	[Menna]
Day 28	Nakhemmut	**[Huynefer / Minkhau]**
Day 29	Harshire	Harshire
Day 30	Pentaweret	**Iyerniutef**

TABLE 26. DUTY ROSTER OF YEAR 30, IV *šmw*

Once again, the date of the duty roster with marks is confirmed by information conserved in a hieratic ostracon. The corresponding hieratic text for O. Ashmolean HO 1084 is O. DeM 145, which records wood deliveries for days 5, 10 and 11 of IV *šmw*, year 30, that perfectly match those of O. Ashmolean HO 1084.

[142] Cf. Collier, 'Integrating Hieratic and Marks Data', [6-7].
[143] Collier, 'Integrating Hieratic and Marks Data', [7, n. 29; 9].

The duty roster of the following month, I *ꜣḫ.t* of year 30, is recorded with marks on ostracon ONL 299. This document must be later than IV *šmw* of year 30, because Nakhemmut is already found in the position of Huynefer.[144] The order of workmen therefore only fits to I *ꜣḫ.t*. Hieratic ostracon O. DeM 145 offers some support for this postulation, albeit meagerly so. The amount of wood delivered on day 30 coincides with the figures in ONL 299, and that of day 21 (316), approaches that of ONL 299 (314).

ONL 298+ can only be the duty roster of IV *ꜣḫ.t*, three months later than the previous document. The sequence of marks reflects the exact same shifts in the turnus that took place some time earlier as evidenced by ONL 336+, which records the turnus of III *ꜣḫ.t* of the same year. ONL 298+ must therefore be later than that month, and the only month that would fit its sequence of marks is IV *ꜣḫ.t* of year 30. The sequence of workmen differs quite a lot from the reconstructed turnus, so the changes are indicated in the table below. Remarkably, the scribe of ONL 298+ was confused by the new duty roster himself. It appears that he automatically noted the mark of Hori down for day 20, after the entry for Iyerniutef on day 19. Four months earlier, Iyerniutef was indeed still followed by Hori, but in the new sequence his slot was occupied by either Huynefer or Minkhau, both represented by the mark ☥. The scribe must have realised his mistake, since he erased the mark of which now only traces are visible.

	Reconstructed turnus	**ONL 298+**
Day 1	Hori	**Huynefer / Minkau**
Day 2	Qenna	**Pentaweret**
Day 3	Anynakht	Anynakht
Day 4	Neferher	Neferher
Day 5	Meryre	**Amenemope**
Day 6	Nesamun	Nesamun
Day 7	Huynefer	**[Nakhemmut]**
Day 8	Khaemnun	[Khaemnun]
Day 9	Neferhotep	Neferhotep
Day 10	Penanuqet	Penanuqet
Day 11	Khaemwaset	Khaemwaset
Day 12	Nakhtmin	Nakhtmin
Day 13	Reshupeteref	Reshupeteref
Day 14	Amenemope	**Meryre**
Day 15	Mose	Mose
Day 16	Menna	Menna
Day 17	Nakhemmut	**Hori**
Day 18	Harshire	Harshire
Day 19	Pentaweret	**Iyerniutef**
Day 20	Hori	{Hori} erased
Day 21	Qenna	**Pentaweret**
Day 22	Anynakht	Anynakht
Day 23	Neferher	Neferher
Day 24	Meryre	**Amenemope**
Day 25	Nesamun	Nesamun
Day 26	Huynefer	**Nakhemmut**
Day 27	Khaemnun	Khaemnun
Day 28	Neferhotep	[Neferhotep]

[144] Cf. Collier, 'Integrating Hieratic and Marks Data', [7-8].

Day 29	Penanuqet	Penanuqet
Day 30	Khaemwaset	Khaemwaset

TABLE 27. DUTY ROSTER OF YEAR 30, IV *ꜣḫ.t*

A date in IV *ꜣḫ.t* year 30 seems to be confirmed by hieratic ostracon O. DeM 144, provided the scribe of the latter document made a minor mistake. The hieratic ostracon is an account of wood deliveries, including those made during IV *ꜣḫ.t* year 30. On the obverse of this document, the entry for day 20 is recorded both in line 11 and 12. Oddly, the entire date line of the day is repeated in line 12, including the season and the month number. If we assume that this is in fact the entry for the following day, day 21, then the amount of 1400 units of wood would coincide with the entry on ONL 298+.

A final piece that dates to year 30 is the well preserved ostracon ONL 340. The sequence of marks on the obverse of this document is best paralleled by ONL 331+, recording the roster of I *pr.t* of year 30. As in this ostracon, ONL 340 does no longer list Qenna or Pentaweret. ONL 340 must therefore date to a month after I *pr.t* of year 30. It lists Harshire and Iyerniutef on days 4 and 5, and going through the reconstructed turnus the best fit for the roster of ONL 340 is III *pr.t* of year 30. This date is supported by the cobra-shaped sign 𓆙 just after the mention of day 1 preserved on the reverse of the ostracon, which must be a reference to *pꜣ-n*(*y*)*-rnn.w.t.t*, the name of the next month, IV *pr.t*. Further evidence that ONL 340 records III and IV *pr.t* is provided by hieratic ostracon O. DeM 35, which lists deliveries for months II, III and IV *pr.t*. Although this piece was attributed to year 28 of Ramesses III by Helck,[145] entries for days 11 – 14, 16, 19 – 21, 27 and 29 of III *pr.t* as well as day 1 of IV *pr.t* correspond almost perfectly to the information recorded in ONL 340. Hieratic ostracon O. DeM 35 must as a consequence date to year 30. ONL 340 demonstrates that in, or just before III *pr.t* of this year, another change took place in the turnus compared to the sequence of marks in the duty roster of I *pr.t* of year 30, preserved in ONL 331+, as a new workman entered the turnus. This novice seems to have entered the *wrš* duty system as a replacement for Pentaweret, who, as we have observed in ONL 298+, is no longer included in the turnus after IV *ꜣḫ.t* of year 30.[146] During the next month, I *pr.t*, his *wrš* tasks were temporarily fulfilled by Khaemnun on day 10, as ONL 331+ indicates. Khaemnun however remained in his original position and served his own duty on day 16 as well. Two months later, ONL 340 informs us that Khaemnun kept to his own slot between Nakhemmut and Neferhotep, and that Iry-ʿa had been added to the turnus in the position previously occupied by Pentaweret, as his permanent substitute. Hence, Iry-ʿa is now attested nine months earlier than his first appearance in the turnus in hieratic sources.[147] It should be noted however, that Iry-ʿa was not entirely new to the *wrš* system. As mentioned above, Iry-ʿa substituted for the *wrš* duty of Khaemnun on at least two occasions. Furthermore, Collier suggested that Iry-ʿa was a son of Khaemnun. We may therefore speculate that Khaemnun 'returned the favour' by substituting for his son Iry-ʿa in the place of Pentaweret in I *pr.t*, even though Iry-ʿa was not yet officially introduced in the turnus.[148] In sum, ONL 340 presents quite some information on the turnus of III *pr.t*:

	Reconstructed turnus	**ONL 340**
Day 1	Mose	Mose
Day 2	Menna	Menna

[145] Helck, *Die datierten und datierbaren Ostraka*, 299-300.
[146] Compare Collier, 'Integrating Hieratic and Marks Data', [12].
[147] O. DeM 157.
[148] See above, 3.2.3.1. Compare also Collier, 'Integrating Hieratic and Marks Data', [11-13].

Day 3	Nakhemmut	**[Huynefer / Minkhau]**
Day 4	Harshire	Harshire
Day 5	Iyerniutef	Iyerniutef
Day 6	Hori	Hori
Day 7	Qenna	**Iry-ʿa**
Day 8	Anynakht	Anynakht
Day 9	Neferher	Neferher
Day 10	Meryre	**Amenemope**
Day 11	Nesamun	Nesamun
Day 12	Huynefer	**Nakhemmut**
Day 13	Khaemnun	Khaemnun
Day 14	Neferhotep	Neferhotep
Day 15	Penanuqet	Penanuqet
Day 16	Khaemwaset	Khaemwaset
Day 17	Nakhtmin	Nakhtmin
Day 18	Reshupeteref	Reshupeteref
Day 19	Amenemope	**Meryre**
Day 20	Mose	Mose
Day 21	Menna	Menna
Day 22	Nakhemmut	**Huynefer / Minkhau**
Day 23	Harshire	Harshire
Day 24	Iyerniutef	Iyerniutef
Day 25	Hori	Hori
Day 26	Qenna	**Iry-ʿa**
Day 27	Anynakht	Anynakht
Day 28	Neferher	Neferher
Day 29	Meryre	**Amenemope**
Day 30	Nesamun	Nesamun

TABLE 28. DUTY ROSTER OF YEAR 30, III *pr.t*

3.2.3.6 Duty rosters of years 31 and 32

The following year 31 is of course the year to which key piece O. Berlin P 12625 dates. As discussed, the convex side displays the duty roster for IV *pr.t* of that year. In the meanwhile it has become apparent that ONL 300 joins to O. Berlin P 12625, elucidating the concave side of the Berlin fragment. Together, the convex side of ONL 300+ records the duty roster for III *pr.t*. This is evident from the sequence of workmen's marks, with Iry-ʿa on duty on day 1 as in hieratic ostracon O. DeM 37 that contains the duty roster for III *pr.t* of year 31. More importantly, the deliveries recorded there for days 1 – 15 are exactly the same as those mentioned on the convex side of ONL 300+ and thus provide a secure date for the piece.

The short sequence of the workmen's marks preserved in O. Ashmolean HO 1092 can only be that of year 31, II *ꜣḫ.t*. A hieratic account of the deliveries of that month is recorded in O. DeM 155, and mentions the delivery of two *ds* jars of beer and one unit of dates on day 12. This entry corresponds to the deliveries recorded on O. Ashmolean HO 1092 for that very same day. Ostracon ONL 321+ contains a sequence of workmen's marks that is the same as in O. Ashmolean HO 1092 and ONL 300+. With the marks of Meryre, Mose and Hori on days 10, 11 and 12 it can only date to month IV *ꜣḫ.t* of year 31. This date is supported by sign 𓎛 at the head of the document, which probably refers to *kꜣ-ḥr-kꜣ*, the name of that month. Moreover, hieratic ostracon O. DeM 157 records deliveries for days 6, 10, 24 of that month, which match with the corresponding entries for these days in ONL 321+. Oddly enough, this

duty roster with marks records for day 1 the mark of Nakhtmin, instead of that of Amenemope who should have been on duty on that day. This can hardly be an indication of a shift of Nakhtmin within the roster, as he is still attested in his original slot on days 8 and 27 of IV *ꜣḫ.t*. His mention on day 1 is hard to explain, and we can only guess that Nakhtmin must have substituted for Amenemope for some reason.

Finally, ONL 6236+ records the duty roster of I and II *pr.t* of year 31. There is very little support for such a date in the hieratic documentation, because the ostraca that record the deliveries for these months, O. DeM 159 and O. DeM 36, are damaged at relevant entries. O. DeM 36 does mention a delivery of two *ds* jars of beer for day 2 of II *pr.t*, also recorded in ONL 6236+, but this correspondence is in itself not enough evidence to date ONL 6236+. The order of the workmen on this ostracon however offers an unequivocal indication of its date. In the sequence, we find mark  for Weserhat on days 21 and 10, while mark for Menna does not feature on the ostracon. Hieratic ostracon O. Prague H 14 reports that in III *ꜣḫ.t* of year 31, the workman Menna was transferred to the left side of the crew, and that in his stead Weserhat joined the right side. Indeed, in the following month Menna's slot, immediately after that of Mose, was taken by Hori as evidenced by hieratic documents[149] and by ostraca with marks.[150] We may therefore expect Weserhat in the turnus lists from IV *ꜣḫ.t* of year 31 onwards, and as a consequence the duty roster of ONL 6236+ can only be that of III *ꜣḫ.t* of year 31 or a later month. The reconstructed turnus lists indicate that Weserhat served his duty on a day 21 only in I *pr.t* of year 31, and thus we have a fixed date for ONL 6236+.

On p. 178-179 it was demonstrated that ONL 318+ records the duty roster of months I and II *šmw* of year 32.

3.2.3.7 Overview of duty rosters composed with marks dated to the reign of Ramesses III

O. Ashmolean HO 1247	R. III, before year 24
O. Fitzwilliam EGA 6120.1943	R. III, before year 24 (perhaps year 20 ?)
ONL 312	R. III, year 25, II *ꜣḫ.t*
O. Glasgow D. 1925.67	R. III, year 25, II *pr.t*
ONL 332	R. III, year 25, IV *pr.t* – year 26, I *šmw*
ONL 447+	R. III, year 26, III – IV *šmw*
ONL 317+	R. III, year 26, IV *ꜣḫ.t*
O. Ashmolean HO 1086	R. III, year 26, IV *pr.t*
O. Strasbourg H 45	R. III, year 27, III *šmw* or II *ꜣḫ.t*
ONL 322+	R. III, year 28, II *šmw*
ONL 338+	R. III, year 28, IV *šmw* – I *ꜣḫ.t*
ONL 333+	R. III, year 28, IV *pr.t*
ONL 320	R. III, year 29, III *ꜣḫ.t*
ONL 330+	R. III, year 29, IV *ꜣḫ.t*
ONL 337	R. III, year 29, I *pr.t*
ONL 297+	R. III, year 30, II – III *šmw*
ONL 6222	R. III, year 30, III *šmw*
O. Ashmolean HO 1084	R. III, year 30, IV *šmw*
ONL 299	R. III, year 30, I *ꜣḫ.t*
ONL 336+	R. III, year 30, III *ꜣḫ.t*
ONL 298+	R. III, year 30, IV *ꜣḫ.t*

[149] O. DeM 157.
[150] ONL 321+; cf. Collier, 'Integrating Hieratic and Marks Data', [13].

ONL 333+ obverse	R. III, year 30, I *pr.t*
ONL 340	R. III, year 30, III – IV *pr.t*
O. Ashmolean HO 1092	R. III, year 31, II *ꜣḫ.t*
ONL 321+	R. III, year 31, IV *ꜣḫ.t*
ONL 6236+	R. III, year 31, I – II *pr.t*
ONL 300+	R. III, year 31, III-IV *pr.t*
ONL 318+	R. III, year 32 / R. IV year 1, I-III *šmw*

3.2.4 Ostraca with marks attributable to the reign of Ramesses III

Three additional ostraca are inscribed with marks of workmen of the right side and can be attributed to the reign of Ramesses III on the basis of the previous examination of duty rosters composed with marks. They do not provide important details for our chronological overview and are discussed in more detail in Appendix I, § 4. For ostraca with identity marks of workmen of the right side of the crew from a time before year 24, see chapter 4, 4.2.2.

3.2.5 Duty rosters composed with marks dating to the reign of Ramesses IV

Ramesses III died in month III *šmw* of the 32nd year of his reign, and his son Ramesses IV then ascended the throne.[151] Not long thereafter several changes took place in the community of Deir el-Medina. In or just before II *ꜣḫ.t*, three months later, Nakhemmut (vi) was appointed as the foreman of the right side of the crew.[152] In this capacity he did no longer participate in the *wrš* duty system, and therefore he was not mentioned in the turnus lists anymore. II *ꜣḫ.t* is also the month in which the group of men on *wrš* duty was augmented with 11 workmen, creating a turnus of 30 days.[153] Since the number of workmen in the *wrš* system now equated the number of days of a month, each workman served on the same day of the month throughout a period of 12 months. Once a year, a workman's *wrš* day would shift five days back due to the five epagomenal days appended to the last month of the calendar year. For example, Weserhat would serve his *wrš* duty in regnal year 1 of Ramesses IV as well as in III and IV *šmw* of year 2 on day 11, but on day 6 from I *ꜣḫ.t* of the same year onwards, until I *ꜣḫ.t* of regnal year 3, when another five days shift backwards would occur.

We are able to follow the first cycles of this 30 days turnus quite well thanks to several hieratic sources. Yet, it is remarkable that we do not possess a single securely dated duty roster for years 3 and 4 of the reign of Ramesses IV, even though there are (fragmentary) records of deliveries to the village. Similarly, there are no unambiguous records of the duty roster for the last years of the reign of Ramesses IV. O. Cairo CG 25658 might be the only exception. Despite the absence of a date the piece was attributed to year 5 of Ramesses IV by Helck[154] on the basis of the workmen who are mentioned in it. Indeed four workmen are recorded to be on duty, but at least three of them, Merysekhmet, Aanakhtu and Seti, are known to have belonged to the left side of the crew.[155] Thus, not only is the date of the ostracon uncertain, we also have to question why these workmen are recorded on *wrš* duty. Were they transferred to the right side, or does this ostracon document *wrš* duties for the left side? Virtually no duty rosters of the left side of the crew are known from the time of the later reign of Ramesses III and the reign of Ramesses IV. It is generally thought that they did not

[151] O. DeM 39, cf. Černý, 'Todes Ramses' III', 109-115.
[152] Collier, 'The right side', 6; 8.
[153] Apparently this increase of men on *wrš* duty is not directly related to an increase of the total number of workmen. The well attested expansion of the workforce by order of Ramesses IV would take place 13 months later in III *ꜣḫ.t* of year 2 according to P. Turin Cat. 1891 rto.
[154] Helck, *Die datierten und datierbaren Ostraka*, 397. Gutgesell, *Die Datierung* I, 79-80, situated the document in the period of year 5 Ramesses IV – year 1 Ramesses V.
[155] See e.g. O. DeM 831, which probably dates to year 2 of Ramesses IV.

exist, but Janssen rightly pointed out[156] that O. Ashmolean HO 127, which mentions year 29 of Ramesses III, does list workmen of the left side responsible for daily deliveries. He suggested therefore that a turnus for the left side must have existed. In his opinion duty rosters for the left side must thus have been created simultaneously with those of the right side, but have simply not survived. O. Cairo CG 25658 does support this hypothesis of Janssen.[157] In fact, we will see further below that in the reigns of Ramesses V and perhaps later kings duty rosters for the left side are attested indeed.[158]

O. Cairo CG 25658 is thus not informative of the duty roster of the right side of the crew. Thankfully, ostraca composed with marks shed some light on the situation. There are several ostraca that record *wrš* duties with marks in the same manner as those of the reign of Ramesses III. Some of these documents can be securely dated while others can be attributed to a specific year in the reign of Ramesses IV with a fair degree of certainty. O. Leiden F. 2000 / 1.5 can be dated to year 1 of his reign on the basis of the sequence of marks alone, with marks  ,  and  for respectively Mose, Pamedunakht called Pasen and Weserhat, on days 10, 11 and 12. The record can be dated even more precisely to II *ꜣḫ.t* of year 1 because the deliveries it mentions for day 10-12 are paralleled by hieratic ostracon DeM 41, which covers this exact month.[159] Together, O. DeM 41 and O. Leiden F. 2000 / 1.5 demonstrate that in year 1 II *ꜣḫ.t* of Ramesses IV mark no longer designated Nakhemmut (vi), but a novice in the turnus, Pamedunakht (i). Nakhemmut (vi) in turn had taken on a new mark that was connected to his new role as foreman of the right side, as will be shown below.[160]

The hieratic sources indicate that from the next month, III *pr.t*, onwards, Mose would serve his *wrš* duty on day 9 during year 1. In the duty roster of ONL 310 the mark of this Mose is connected with day 4, five days earlier and therefore a year later. A date in regnal year 2 of Ramesses IV is also suggested by the partially preserved year number at the head of the document. No information from hieratic documents overlaps with the deliveries recorded in this ostracon, so the piece cannot be attributed to a specific month of Ramesses IV's year 2. Hieratic parallels do exist for O. Turin N. 57393 and ONL 316. The former is datable to II *pr.t* of year 2 thanks to hieratic ostracon O. Ashmolean HO 131 which duplicates the same wood deliveries for days 29 and 30. The sequence of workmen's marks on ONL 316 dates that piece securely in year 2 of Ramesses IV as well. The sign  just above day 1 on this piece is a reference to month IV *pr.t*, suggesting that the other days belong to III *pr.t*. That is confirmed by hieratic ostracon O. Prague H 25, attributed to the same month in year 2 of Ramesses IV, which records the same wood deliveries for day 23 as ONL 316 does. O. Cairo SR 12165 is very fragmentary but might date to the next month. The only preserved entry records Harshire on day 10, with in the line above once again sign for IV *pr.t*. Harshire had also served on day 10 of IV *pr.t* in year 31 of the reign of Ramesses III. However, this month is already covered by ONL 300+. It is therefore plausible that O. Cairo SR 12165 deals with year 2 of Ramesses IV, when Harshire's duty was also scheduled for day 10. Ostraca ONL 309 and ONL 329 are brief records too, but the day numbers and the workmen connected with them allow for a date in the period of I *ꜣḫ.t* – IV *pr.t* of year 2 or the first four months of year 3. There are no signs for months or hieratic parallels that suggest a month in particular. Likewise, O. Varille 425 and O. Ashmolean HO 1249 must date to year 2 I *ꜣḫ.t* –

[156] Janssen, 'Literacy and Letters', 85.
[157] See also Haring, 'Between Administrative Writing and Work Practice', [4-5].
[158] See below, 3.2.7.1.
[159] Cf. Haring and Soliman, 'Ostraca with Workmen's Marks', 86-88.
[160] See below, 3.2.7.4.

IV *pr.t* or I – IV *šmw* of year 3 on the basis of the sequence of marks, but no or not enough data from hieratic documents are available to provide further evidence.[161]

Collectively the duty rosters documented with marks, which are dated to year 2, cover almost all 30 days of the turnus of that calender year. This is demonstrated in the TABLE 29. Several specific days are recorded in more than one ostracon, and each ostracon records the same mark for that day. We can therefore be fairly certain that no changes took place in the turnus of year 2.

	Turin N 57393	ONL 316	Cairo SR 12165	Ashmolean HO 1249	ONL 309	ONL 310	ONL 329	Varille 425
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

Year 2 and 3	
	Nakhtmin
	Reshupeteref
	Meryre
	Mose
	Pamedunakht
	Weserhat
	Minkhau
	Iry-‘a
	[Amennakht]
	Harshire
	Iyerniutef
	Nebnakht
	Wesekhnemtet
	Pentaweret
	Nakhemmut
	[Amennakht]
	[Amennakht]
	Tasheri
	Maaninakhtuf
	Amenhotep
	Bakenamun
	[Anynakht]
	Neferher
	Amenemope
	Nesamun
	Khaemnun
	Hori
	Neferhotep
	Penanuqet
	Khaemwaset

TABLE 29. OSTRACA WITH MARKS RECORDING THE DUTY ROSTER OF RAMESSES IV YEAR 2 AND 3

[161] Day 14 on Varille 425 contains a fragmentary entry of the delivery of two *ds* jars of beer. This corresponds to the delivery on day 14, I *pr.t* of year 2 documented by Ashmolean HO 113. This parallel is nevertheless too insignificant to use it as the basis for a date of Varille 425.

As mentioned above, we do not possess any clear hieratic documentation about the turnus of the remaining years of the reign of Ramesses IV. Remarkably, ostraca with marks do appear to record the turnus during this period. This is best illustrated by O. Ashmolean HO 1250. The document is headed by a regnal year 4, indubitably of Ramesses IV. The ostracon records days 1 to 28 and the sequence of workmen is precisely that of years 1 and 2. It lists  , the mark of Iyerniutef on day 1, which is 10 days earlier than his position in year 2 when his slot was on day 11. After year 2, the turnus had thus gone through two cycles of epagomenal days causing Iyerniutef's position to shift 10 days backwards. O. Ashmolean HO 1250 must therefore record a month in regnal year 4 of Ramesses IV. This means that throughout years 3 and 4 the length as well as the sequence of workmen within the turnus remained unaltered.

Indeed, there are three ostraca which we can place in year 3 of Ramesses IV on the basis of the sequence of marks. The first one is O. UC 31967, which covers some days of the month III *pr.t*, as the month signs  and  indicate. This document may in fact cover at least partially two other months of the same year, because day 25 with mark  for Khaemwaset is mentioned three times. This observation supports the supposition that the turnus of I *ꜣḫ.t* – IV *pr.t* of year 3 and I – IV *šmw* of year 4 remained 30 days long. O. Ashmolean HO 1088 was probably produced around the same time, as the sequence of marks fits to the turnus of year 3. The ostracon is provided with month sign  as well, and seems to have been dedicated in its entirety to III *pr.t* of year 3. The sequence of workmen's marks on ONL 313 is also datable to year 3. Together, the three ostraca dated in the period of I *ꜣḫ.t* – IV *pr.t* of year 3 and I – IV *šmw* of year 4 record all 30 days of the month, and the turnus can thus be reconstructed as follows:

	ONL 313	Ashmolean HO 1088	UC 31967
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

Year 3 and 4	
	Weserhat
	Minkhau
	Iry-‘a
	Amennakht
	Harshire
	Iyerniutef
	Nebnakht
	Wesekhnemtet
	Pentaweret
	Nakhemmut
	Amennakht
	Amennakht
	Tasheri
	Maaninakhtuf
	Amenhotep
	Bakenamun
	Anynakht
	Neferher
	Amenemope
	Nesamun
	Khaemnun
	Hori
	Neferhotep
	Penanuqet
	Khaemwaset
	Nakhtmin
	Reshupeteref
	Meryre
	Mose
	Pamedunakht

TABLE 30. OSTRACA WITH MARKS RECORDING THE DUTY ROSTER OF RAMESSES IV YEAR 3 AND 4

The turnus of year 4 is most completely preserved in O. Ashmolean HO 1250, but five more ostraca date somewhere in the period of I *ꜣḫ.t* – IV *pr.t* of year 4 and I – IV *šmw* of year 5, because the preserved sequence of workmen's matches that of O. Ashmolean HO 1250. These ostraca are ONL 341, O. Ashmolean HO 1093, O. Ashmolean HO 1094, O. Ashmolean HO 1080 and O. Ashmolean HO 1082. The latter contains a month sign for IV *ꜣḫ.t* and can thus be attributed to that month in year 4 of Ramesses IV. The other ostraca cannot be dated with more precision. However, it is once more possible to reconstruct the entire turnus for I *ꜣḫ.t* – IV *pr.t* of year 4 and I – IV *šmw* of year 5 as all 30 days of the month are covered by these six ostraca. The table below demonstrates that the turnus remained unchanged throughout the period. The only entry that is out of the ordinary is day 25 on O. Ashmolean HO 1094, where the mark of Weserhat has been inscribed instead of that of Pamedunakht. Weserhat's duty was, according to the other ostraca, to be performed one day later on day 26. Remarkably, no identity mark is connected with day 26 on O. Ashmolean HO 1094. We can only speculate as to why this is so. The simplest explanation would be to suppose that Weserhat substituted for Pamedunakht on this particular occasion. Indeed, we shall see below that Pamedunakht reappears in later duty rosters in his original position between Mose and Weserhat.

	Ashmolean HO 1250	Ashmolean HO 1093	Ashmolean HO 1094	Ashmolean HO 1080	Ashmolean HO 1082	ONL 314
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26			-			
27						
28						
29						
30						

Year 4 and 5	
	Iyerniutef
	Nebnakht
	Wesekhnemtet
	Pentaweret
	Nakhemmut
	Amennakht
	Amennakht
	Tasheri
	Maaninakhtuf
	Amenhotep
	Bakenamun
	Anynakht
	Neferher
	Amenemope
	Nesamun
	Khaemnun
	Hori
	Neferhotep
	Penanuqet
	Khaemwaset
	Nakhtmin
	Reshupeteref
	Meryre
	Mose
	Pamedunakht
	Weserhat
	Minkhau
	Iry-‘a
	Amennakht
	Harshire

TABLE 31. OSTRACA WITH MARKS RECORDING THE DUTY ROSTER OF RAMESSES IV YEAR 4 AND 5

A single ostracon, ONL 314, can be attributed to the period of I *ꜣḫ.t* – IV *pr.t* of year 5 and I – IV *šmw* of year 6. No regnal year number is preserved on this document and there is no hieratic source which parallels the record, but the sequence of workmen's marks is the same as found in year 4. In ONL 314 however, every slot is five days earlier, and therefore the turnus is that of a year later. Similarly, O. UC 31959 must be attributed to a month in the period of I *ꜣḫ.t* – IV *pr.t* of year 6 and I – IV *šmw* of year 7. The partially preserved sequence of workmen is that of year 4, but each workman has moved 10 days backwards in the turnus. It is therefore reasonable to date the ostracon in the last eight months of year 6 or in the first four months of year 7.

	UC 31939	Year 6 and 7	
1			
2			
3			
4			
5			Nesamun
6			Khaemnun
7			Hori
8			Neferhotep
9			[Penanuqet]
10			[Khaemwaset]
11			[Nakhtmin]
12			Reshupeteref
13			Meryre
14			[Mose]
15			Pamedunakht
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

TABLE 32. OSTRACA WITH MARKS RECORDING THE DUTY ROSTER OF RAMESSES IV YEAR 6 AND 7

Overview of duty rosters composed with marks dated to the reign of Ramesses IV

O. Leiden F. 2000 / 1.5	R. IV, year 1, II *ꜣḫ.t*
O. Turin N. 57393	R. IV, year 2, II *pr.t*
ONL 316	R. IV, year 2, III *pr.t*
O. Cairo SR 12165	R. IV, year 2, IV *pr.t* (?)
O. Ashmolean HO 1249	R. IV, year 2 or 3
ONL 309	R. IV, year 2 or 3
ONL 310	R. IV, year 2 or 3
O. Varille 425	R. IV, year 2 or 3
ONL 329	R. IV, year 2 or 3 ?
O. Ashmolean HO 1088	R. IV, year 3, III *pr.t*
O. UC 31967	R. IV, year 3, III *pr.t*
ONL 313	R. IV, year 3 or 4
O. Ashmolean HO 1082	R. IV, year 4, I *ꜣḫ.t*
O. Ashmolean HO 1250	R. IV, year 4
O. Ashmolean HO 1093	R. IV, year 4 or 5
O. Ashmolean HO 1094	R. IV, year 4 or 5
O. Ashmolean HO 1080	R. IV, year 4 or 5
ONL 341	R. IV, year 4 or 5
ONL 314	R. IV, year 5 or 6
O. UC 31959	R. IV, year 6 or 7

3.2.6 Ostraca with marks attributable to the reign of Ramesses IV

A small number of ostraca inscribed with identity marks of workmen of the right side are probably attributable to the reign of Ramesses IV on account of adherence to the roster sequence of that time. For a discussion of their date, see Appendix I, § 5; for their meaning, see chapter 4, 4.3.

3.2.7 Duty rosters composed with marks dating to the reign of Ramesses V or later

3.2.7.1 The hieratic sources

As in the greater part of the reign of Ramesses IV, there are very few available hieratic records that contain turnus lists for the period of the reign of Ramesses V and subsequent kings that are straightforwardly interpreted as such. That is unfortunate, because we possess a modest corpus of duty rosters composed with marks that must date to the very end of the reign of Ramesses IV, or, as we shall see, the reign of Ramesses V or later. In order to interpret this group of ostraca, it is imperative to briefly examine the small number of hieratic texts that do seem to document duty rosters dating to the time of Ramesses V or later. Among these ostraca is O. Cairo CG 25609,[162] discussed below in more detail, which will be of great importance for our current purposes. The other ostraca are very interesting, but it will be shown that they do not constitute written parallels to the duty rosters composed with marks.

Hieratic duty rosters from the period after the reign of Ramesses IV were examined by Gutgesell.[163] Leaving O. Cairo CG 25609 aside for now, Gutgesell listed 10 hieratic ostraca that are concerned with *wrš* duties, dated to the reign of Ramesses V onwards:

[162] Attributed to year 1 of Ramesses V by Gutgesell, *Die Datierung* I, 74-75 and Helck, *Die datierten und datierbaren Ostraka*, 419.

[163] Gutgesell, *Die Datierung* I, 73-89. Mention of the *wrš* duties *an sich* is made in O. Turin N. 57441, O. Cairo CG 25305, P. Turin Cat. 1898+, P. Turin Cat. 1900+ and P. Turin Cat. 2072, attributed to the period of the reigns of Ramesses V – Ramesses IX. These documents do however not contain actual duty rosters. A double *wrš* duty

O. DeM 196	IV *šmw*, year 3, attributed to R. VII[164] or R. IX[165]
O. Ashmolean HO 143	year 2, attributed to R. IX[166]
O. Ashmolean HO 302+	II *šmw*, year 2, attributed to R. VI[167]
O. Ashmolean HO 145	year 1, attributed to R. V or R. VI[168]
O. Ashmolean HO 160	year 2, attributed to R. V or R. VI [169]
O. IFAO 384	perhaps a year 1, attributed to R. V[170]
Weight Gardiner 10	day 28 in the *pr.t* season, attributed to R. V or R. VI[171]
O. Cairo CG 25658	attributed to period of year 5 R. IV – year 1 R. V[172]
O. UC 39624	year 2, attributed to R. V or R. VI[173]
O. Ashmolean HO 16	attributed to R. V or R. VI[174]

To this list we can now add P. Milan RAN E 0.9.40126+, a journal text that records several events including deliveries, attributed to the reign of Ramesses IX.[175] Column II of the verso of this papyrus mentions *wrš* duties that took place during II *ꜣḫ.t* of year 9. On day 10 and perhaps day 15, the text explicity mentions that the *wrš* duty performed on these days were related to "the right side of the gang". There are convincing arguments to assume that the *wrš* duty performed on days 12-14 were also the responsibilities of members of the right side. The men on duty on days 12-14 were an Amennakht, a Pentaweret and a Pa[…]hotep. These three names are mentioned in exactly the same sequence in an ordered list of workmen of the right side dated to year 17 of Ramesses IX.[176] The *wrš* duties in column II are therefore clearly entrusted to members of the right side.[177]

Although a duty roster of such a late date is rather unique and thus very interesting, it is here of little use to us because we will see that the duty rosters composed with marks date to the first half of the 20th Dynasty exclusively. We therefore return to the sources mentioned by Gutgesell. The first two ostraca contain very little information about the actual turnus and

(for the right and the left side) is mentioned in P. Turin PN 109 vso. I (see Černý NB 152.20), an account of deliveries and distribution on different days in year 7 of the reign of Ramesses IV or Ramesses V. The reference to this document as well as the approximate date were kindly provided by Kathrin Gabler, personal communication, 2014.

[164] Helck, *Die datierten und datierbaren Ostraka*, 456.

[165] Gutgesell, *Die datierung* I, 76.

[166] Gutgesell, *Die datierung* I, 76; Helck, *Die datierten und datierbaren Ostraka*, 472.

[167] Gutgesell, *Die datierung* I, 76-77; Helck, *Die datierten und datierbaren Ostraka*, 445.

[168] Gutgesell, *Die datierung* I, 77-78; Helck, *Die datierten und datierbaren Ostraka*, 441.

[169] Gutgesell, *Die datierung* I, 78; Helck, *Die datierten und datierbaren Ostraka*, 442.

[170] Gutgesell, *Die datierung* I, 79; Helck, *Die datierten und datierbaren Ostraka*, 426, 427.

[171] Gutgesell, *Die datierung* I, 79.

[172] Gutgesell, *Die datierung* I, 79-80; Helck, *Die datierten und datierbaren Ostraka*, 397; 399.

[173] Gutgesell, *Die datierung* I, 80; Helck, *Die datierten und datierbaren Ostraka*, 443; 445; but thought to date to the end of the reign of Ramesses III by Haring, 'Between Administrative Writing and Work Practice', [4, n. 11].

[174] Gutgesell, *Die datierung* I, 81; Helck, *Die datierten und datierbaren Ostraka*, 429-430; but compare Haring, 'Between Administrative Writing and Work Practice', [4, n. 11].

[175] Rob J. Demarée, 'Ramesside administrative papyri in the Civiche Raccolte Archeologiche e Numismatiche di Milano' *JEOL* 42 (2010), 55-79.

[176] P. Turin Cat. 2001+ rto. III – IV. This list conveniently records the filiation of these three men, identifying them as Amennakht (ix), Pentaweret (iv) and Prehotep (ii).

[177] In column III of the same document, a damaged entry informs us that on day 24 of the same month a […]-hotep, son of Amennakht stood on watch. He is most likely the draughtsman Amenhotep (vi). In the list of P. Turin Cat. 2001+ he is mentioned among the workmen of the left side, but this does necessarily mean that he was associated with this side. Amenhotep (vi) is in this period referred to as the chief draughtsman (see Davies, *Who's who*, 112-113), and like the senior necropolis scribe he may have supervised the entire crew. Additionally, Amenhotep (vi)'s mark is recorded among workmen of the right side in ostraca with ordered lists of workmen's marks from the period of Ramesses VI – Ramesses IX such as O. IFAO C 7638, see chapter 4, 4.2.1.

date to the later period of the 20th Dynasty, and we will not focus on them much in this context. The other ostraca were analysed in some detail by Gutgesell. He theorised that within this group of ostraca, O. UC 39624 and O. Ashmolean HO 16 indicate a 19 days turnus,[178] and that perhaps O. DeM 196, O. Ashmolean HO 302+, O. Ashmolean HO 145, O. Ashmolean HO 160 and O. IFAO 384 record fragments of a turnus of the same length.[179] Furthermore, Gutgesell attempted to determine to which side of the crew the workmen listed in these documents belonged, and remarked rightfully that in order to answer that question one is forced to rely on documents that predate the reign of Ramesses V.[180] Basing himself on O. Ashmolean HO 127, the account from year 29 of Ramesses III we have already mentioned above,[181] he suggested that the majority of individuals on duty in O. DeM 196, O. Ashmolean HO 16, O. UC 39624 and O. IFAO 384 were members of the left side.[182] Gutgesell did remark that while Weserhat is listed among the left side in O. Ashmolean HO 127, he was transferred to the right side in year 31 of Ramesses III, where we find him in hieratic documents as well as in the duty rosters composed with marks. Concerning the other ostraca, Gutgesell suggested the workmen in O. Cairo CG 25609, O. Ashmolean HO 143, Weight Gardiner 10 and O. Cairo CG 25658 belonged to the left side too.[183] As a matter of fact, we have already discussed the latter piece above,[184] and came to the same conclusion. The other ostraca were interpreted as duty rosters for the right side. Gutgesell based his argument essentially on his date of some of the seven duty rosters recording workmen of the left side, which would overlap with his date of O. Ashmolean HO 145. Since the workmen in the latter document were different from those in the duty rosters of the left side, O. Ashmolean HO 145 and, by association, O. Ashmolean HO 302+ and O. Ashmolean HO 160 could only record workmen of the right side.[185]

Gutgesell's observation that many workmen on the abovementioned ostraca belong to the left side is correct. In fact, we can make a case for all of these ostraca dealing merely with workmen of the left side. For one, none of the workmen they mention, with the exception of the common names Hori and Amenhotep, are known from the hieratic duty rosters or from those composed with marks from the reign of Ramesses IV. Moreover, the majority of these workmen were associated with the left side of the crew under the reigns of Ramesses III and Ramesses IV. We find their names in hieratic ostraca O. Turin N. 57030 and O. Turin N. 57046 (both probably year 24 of Ramesses III), O. MMA 09.184.702 (attributed to year 1 of Ramesses IV) and O. DeM 831, an ordered list of workmen of the left side (attributable to the beginning of the reign of Ramesses IV). The attestations are given in the table below. Admittingly, all these sources are presumably older than the duty rosters under discussion here, and not every single workman is securely attested on the left side. It is however still plausible that some of the workmen who cannot be demonstrated to have served on the left side did indeed belong to that part of the crew. For example, the Diamunkhopshef mentioned in O. Ashmolean HO 160 – if that is indeed how we should read this name – can only be Diamunkhopshef (i), son of Qedhirakhetef (ii) mentioned in O. Ashmolean HO 16. The latter is securely associated with the left side and even co-directed this side as the deputy. More importantly, it is hard to imagine that all of the workmen in the duty rosters mentioned by Gutgesell would have shifted to the right side over the course of the years of the end of the reign of Ramesses IV and the reign of Ramesses V. The conclusion can therefore only be that

[178] Gutgesell, *Die datierung* I, 82-83.
[179] Gutgesell, *Die datierung* I, 84-87.
[180] Gutgesell, *Die datierung* I, 83.
[181] See above, 3.2.5.
[182] Gutgesell, *Die datierung* I, 83-84.
[183] Gutgesell, *Die datierung* I, 89.
[184] See above, p. 197-198.
[185] Gutgesell, *Die datierung* I, 88-89.

wrš duties of workmen of the left side are attested in hieratic on ostraca that probably date to the first half of the 20th Dynasty.[186]

Workman	**Attested in**	**Attested on the left side in**
Nebnefer	O. Ashm. 145 O. UC 39624	O. DeM 831
Buqentuef	O. Ashm. 145 O. Ashm. 160 O. Ashm. 302+	O. MMA 09.184.702
Parahotep	O. Ashm. 145 O. Ashm. 160	
Hormin	O. Ashm. 145	O. DeM 831
Huynefer	O. Ashm. 145 O. Ashm. 160	
Amenherkhopshef / Diamunkhopshef	O. Ashm. 160	Diamunkhopshef is a son of Qedhirakhetef;[187] served perhaps on the same side
Sem	O. Ashm. 160	
Penniut	O. Ashm. 160	O. DeM 831
Horinefer	O. Ashm. 160 O. Ashm. 302+	O. DeM 831
Wennefer	Weight Gardiner 10 O. Ashm. 16	
Aanakhtu	O. Cairo CG 25658 O. UC 39624 O. Ashm. 16	O. DeM 831
Merysekhmet	O. Cairo CG 25658	O. DeM 831
Amenhotep	O. Cairo CG 25658	
Seti	O. Cairo CG 25658	O. DeM 831 O. MMA 09.184.702
Ruta	O. UC 39624 O. Ashm. 16	O. Turin N. 57046
Seba	O. UC 39624	
Bakenwerel	O. UC 39624 O. Ashm. 16	O. DeM 831 O. MMA 09.184.702
Telmontu	O. UC 39624 Weight Gardiner 10	O. MMA 09.184.702 O. Turin N. 57030
Amenemone	O. UC 39624 O. Ashm. 16	
Hay	O. UC 39624 O. Ashm. 16	O. DeM 831
Weserhat	O. UC 39624	
Qenna	O. UC 39624	O. DeM 831
Khnummose	O. Ashm. 16	O. Turin N. 57030
Hori	O. Ashm. 16	
Qedhirakhetef	O. Ashm. 16	O. DeM 831 O. MMA 09.184.702

[186] Cf. Haring, 'Between Administrative Writing and Work Practice', [4].
[187] Davies, *Who's who*, 56.

3.2.7.2 O. Cairo CG 25609: A hieratic duty roster of the right side of the crew

There is, however, one hieratic document that records a duty roster for the right side, which must date to the reign of Ramesses V. This key piece is the aforementioned O. Cairo CG 25609, presented in the table below. The ostracon records *wrš* duties for III and IV *šmw* of a year 1 and was attributed to the reign of Ramesses V by several authors.[188] This attribution can indeed be defended, since the turnus it records is not that of the time of Ramesses III or Ramesses IV, even though it still contains many workmen who are included in the turnus of the reign of the latter king. Moreover, several workmen in O. Cairo CG 25609 appear in the same sequence of the turnus of Ramesses IV, such as Nebnakht, who is followed by Wesekhnemtet (compare the rightmost column of TABLE 33). O. Cairo CG 25609 is however a problematic piece because it seems to demonstrate that on several days, including the weekends and the first days of the month, no *wrš* duties were performed at all. The sequence of workmen sometimes continues after these free days in accordance with the turnus. For example, the *wrš* duty of Mose is given on day 28. Skipping over days 29, 30, 1 and 2, which are recorded as free days, the next *wrš* duty is performed by Pamedunakht on what must be day 3 and Weserhat on day 4.[189] The sequence Mose – Pamedunakht – Weserhat is exactly the same in the turnus from the reign of Ramesses IV. A similar situation is documented for preceding slots. We observe that Hori is recorded on *wrš* duty on a day that can only be day 18. Days 19, 20 and 21 are days off, and Neferhotep is listed as the workman on *wrš* duty for what can only be day 22.[190] It thus appears that no workman is listed for days 19 – 21, because we know from the turnus of the reign of Ramesses IV that Neferhotep followed the slot of Hori.

The observation that the duty roster was interrupted by inactive days for which no *wrš* duty was scheduled is rather disconcerting. This constitutes an important break from the usage of the turnus of the preceding period, during which the duty roster would continue to wander throughout the calendar regardless of free days. This change would mean that when the actual records are not available, the duty roster can no longer be reconstructed. Morover, it renders the task of reconstructing the exact sequence of the turnus a very precarious one. For now, we come to a sequence that, largely based on the turnus of the reign of Ramesses IV, must have looked like that presented in the middle column of the following table.

O. Cairo CG 25609: III – IV *šmw*, year 1 Ramesses V		**Reconstructed sequence of turnus year 1 Ramesses V**	**Turnus Ramesses IV**
[18]	Hori	Hori	Hori
19	Free [no duty]	Nefer[hotep]	Neferhotep
20	Free [no duty]	[Penanuqet ?]	Penanuqet
21	Free [no duty]	[Khaemwaset ?]	Khaemwaset
2{1}<2>	Nefer[hotep]	[Nakhtmin ?]	Nakhtmin
[23]	[…]	[Reshupeteref ?]	Reshupeteref
[24]	[…]	[Meryre ?]	Meryre
[25]	[…]	Mose	Mose

[188] *KRI* VI, 245-246; Gutgesell, *Die datierung* I, 74-75; Helck, *Die datierten und datierbaren Ostraka*, 419; Haring and Soliman, 'Ostraca with workmen's marks', 76.

[189] Contra Černý, *Ostraca hiératiques. Nos. 25501-25832*, pl. 60*, who ammends day 5 for Weserhat. However, as the days preceding that of Pamedunakht are days 1 and 2, it seems most logical to continue enumerating with days 3 and 4 for Pamedunakht and Weserhat. Obverse II 8-9 must consequently have contained days 5 and 6, so that reverse I 1 neatly adjoins day 7.

[190] The part of the ostracon that contains the day number is damaged, but was tentatively transcribed by Černý as 'day 21'.

[26]	[…]		Pamedunakht	Pamedunakht
[27]	[…]		Weserhat	Weserhat
28	{Pa-}Mose		[Minkhau ?]	Minkhau
29	Free [no duty]		[Iry-ʿa ?]	Iry-ʿa
30	Free [no duty]		Amennakht	Amennakht
1	Free [no duty]		Khonsu	Harshire
2	Free [no duty]		?	Iyerniutef
[3]	Pamedunakht		?	Nebnakht
{5} <4>	Weserhat		Bakenamun	Wesekhnemtet
[5]	[…]		Amenwa	Pentaweret
[6]	[…]		Nebnakht	Nakhemmut
7	{Pa-}Amennakht		Wesekhnemtet	Amennakht
8	Khonsu		Maaninakhtuf	Amennakht
9	- [omitted]		Nakhemmut	Tasheri
10	- [omitted]		Amennakht	Maaninakhtuf
11	Bakenamun		Amennakht	Amenhotep
12	Amenwa		Ta[sheri]	Bakenamun
13	Nebnakht		Pa[shedu]	Anynakht
14	Wesekhnemtet		Pahemnetjer	Neferher
-	- [omitted]		Penmennefer	Amenemope
16	Maaninakhtuf		Pen[niut]	Nesamun
17	Nakhemmut		…	Khaemnun
18	Amennakht son of Khaemnun			
19	Free [no duty]			
20	Free [no duty]			
21	Amennakht			
22	Ta[sheri]			
23	Pa[shedu]			
24	Pahemnetjer			
25	Penmennefer			
26	Pen[niut]			

TABLE 33. O. CAIRO CG 25609 COMPARED TO THE TURNUS OF RAMESSES IV

Despite the fact that we can only tentatively recreate the exact sequence of workmen in the turnus of O. Cairo CG 25609 it is certain that a duty roster of the right side existed after the reign of Ramesses IV. Our reconstruction indicates that at the time of O. Cairo CG 25609, at least five new workmen were introduced in the turnus: Amenwa, Pashedu, Pahemnetjer, Penmennefer, and Penniut. Since the document breaks off after day 26 we are at this point unable to determine the total number of workmen included in the turnus, but it may well have been more than 30.

3.2.7.3 The hypothetical 45 days turnus

That is also suggested by a number of duty rosters composed with marks, which record sequences of workmen's marks which do not match the turnus of the time of Ramesses III or Ramesses IV. There are several of such pieces, but it is challenging to date them because of their fragmentary state. Not a single ostracon clearly contains an entire cycle of the duty roster. Moreover, it appears that several changes took place in the sequence of the workmen within the turnus because not many duty rosters contain the same order of workmen's marks. Among these duty rosters is O. Glasgow D. 1925.80, which has been discussed elsewhere on

several occasions,[191] but still could not be dated any more precisely than to the period after the reign of Ramesses IV. As we shall see, we will not succeed in finding an exact date for the piece either. The duty roster begins on the obverse of the ostracon with day 1. Tantalisingly, a *rnp.t* sign is visible just in front of the day 1, but the year number has broken off or was never added. The ostracon records the days of an entire month – although the workmen's marks for days 13, 16 and 17 have not survived – and at least the first five days of the next month. Not a single workman's mark is repeated and therefore it represents a turnus that is longer than 30 days. The workmen's marks on this piece are evidently related to the duty roster ostraca composed with marks during the time of Ramesses IV, because it displays many of the same marks and several of them are given in the same relative position of the 30 days turnus. O. Glasgow D. 1925.80 can therefore not be far removed from it in time, and a date at the very end of the reign of Ramesses IV or some time later seems most plausible.

Presumably, ONL 6219 is closely related to the Glasgow piece. It is less well preserved but it lists the same marks on days 4 – 10 and 18 and 19. In contrast to O. Glasgow D. 1925.80, day 17 is still visible and records the mark of Meryre. A third ostracon, O. Cairo JE 96328, contains only a single entry for day 15, but it might be related.[192] Days 3 – 5 of the second month on O. Glasgow D. 1925.80 display marks  ,  , and . The exact same marks are also recorded for these days on O. Ashmolean HO 1095. Interestingly, this ostracon continues with several marks that are not recorded on O. Glasgow D. 1925.80, until it reaches day 16, for which mark is inscribed. From that point onwards, the partially preserved sequence of marks adheres once more to the roster of O. Glasgow D. 1925.80. The only discrepancy is the position of mark of Bakenamun, situated between and on O. Glasgow D. 1925.80, but between and on O. Ashmolean HO 1095. Apart from this discrepancy, O. Ashmolean HO 1095 seems to fill most of the gaps in the turnus that is partially preserved on O. Glasgow D. 1925.80: after mark on O. Ashmolean HO 1095 follow marks to , after which comes , the first mark recorded on O. Glasgow D. 1925.80. If we are correct in assuming that O. Glasgow D. 1925.80 and O. Ashmolean HO 1095 date to the same period, both ostraca thus demonstrate that after mark follow another 10 different marks. This means that the turnus included at this time 45 different workmen, a figure that is unparalleled by hieratic documentation.

Ostraca O. Ashmolean HO 1090 and O. Ashmolean HO 1078 are probably related to this group of ostraca as well. They display only a small number of workmen's marks, but their sequence matches the one attested in O. Glasgow D. 1925.80. However, O. Ashmolean HO 1090 and O. Ashmolean HO 1078 differ from that piece in that the workmen are recorded 10 days later in the former ostracon, and, provided that the sequence of O. Ashmolean HO 1095 complements that of O. Glasgow D. 1925.80, 15 days later in the latter. Both ostraca thus support the reconstruction of a turnus of 45 days: theoretically speaking O. Ashmolean HO 1078 could record the turnus cycle just before that of O. Glasgow D. 1925.80, while O. Ashmolean HO 1090 could record the duty roster for a time after a five days shift backwards caused by the five epagomenal days at the end of the calendar year. Collectively these ostraca allow the construction of the following hypothetical turnus of 45 days:

[191] Most importantly by McDowell, *Hieratic ostraca*, 19-20; Haring, 'Decoding the Necropolis Workmen's Funny Signs', 46, 52-53; Haring and Soliman, 'Ostraca with Workmen's Marks', 74-78.
[192] That is suggested by the list of workmen's marks on the obverse of the same ostracon, see below, 3.2.7.4.

	Glasgow D 1925.80	ONL 6219	Cairo JE 96328	Ashmolean HO 1095	Ashmolean HO 1090	Ashmolean HO 1078		Turnus Ramesses V
1								
2								
3								
4								
5								
6								Anynakht
7								Neferher
8								Amenemope
9								Nesamun
10								Khaemnun
11								Hori
12								Neferhotep
13								Penanuqet
14								Khaemwaset
15								Nakhtmin
16								
17								Meryre
18								Mose
19								Pamedunakht
20								Weserhat
21								Minkhau
22								Iry-‘a
23								Amennakht
24								Iyerniutef
25								Amenhotep
26								Pentaweret
27							?	Bakenamun
28								
29								Nebnakht
30								Wesekhnemtet
1								Maaninakhtuf
2								Nakhemmut
3								Amennakht
4								Amennakht
5								
6								
7								
8								
9							?	?
10								
11								
12								
13								
14								
15								

TABLE 34. OSTRACA WITH MARKS RECORDING THE DUTY ROSTER OF C. RAMESSES V, YEAR 2

Indeed, the question if the duty roster of O. Ashmolean HO 1095 can be taken to fill in the gap present in the duty roster of O. Glasgow D. 1925.80 is crucial, but cannot be answered with any certainty. There are nevertheless indications – no hard evidence – that the sequence of O. Glasgow D. 1925.80 continued after the slot of 𓅱 when we look at a few ostraca with lists of marks. These lists, often only partially preserved, are no duty rosters but are comparable because they are inscribed according to the same sequence of workmen. One of such documents with a list is O. BTdK 541. On the obverse fragments of three columns of workmen's marks are preserved in an order that overlaps with the sequence of O. Glasgow D. 1925.80, although marks 𓎛 and 𓏏 are situated in different positions on this ostracon. Relevant information is found in the third column of O. BTdK 541, where marks 𓏠, 𓌙 and 𓅱 are followed by 𓈖 and 𓂋. That is interesting, because in O. Glasgow D. 1925.80 and O. Ashmolean HO 1095 marks 𓏠, 𓌙 and 𓅱 are followed by 𓈖 as well. Similarly, the much effaced O. Cairo SR 12218 contains three columns of workmen's marks in a sequence that in part corresponds to the hypothetical turnus. The bottom of the first column and the second column are inscribed with workmen's marks in the same order as on O. Glasgow D. 1925.80 and ONL 6219. After an illegible bit, we can pick up the sequence in the middle of the third column with mark 𓎟, doubtlessly a variant of 𓎛. The succeeding marks 𓏠 to 𓂋 fit perfectly to the hypothetical turnus proposed above in the right column of TABLE 34. The last bit of the sequence is inscribed in the beginning of the leftmost column and differs somewhat from the order of marks in O. Ashmolean HO 1095 and O. Glasgow D. 1925.80, but is nevertheless quite similar to it (TABLE 35). One last indication that more than 30 workmen were included in the turnus of O. Glasgow D. 1925.80 and ONL 6219 is provided by the latter ostracon, where a section is added just above the duty roster inscribed on the obverse. In this section a number of marks are inscribed in black ink referring to workmen securely attested in the duty rosters of the right side. Among these marks are 𓇋 (line 1) and 𓂋 (line 2), both present in the part of the turnus preserved on O. Ashmolean HO 1095.

If we assume that it is possible to adjoin the sequence of marks 𓅱 – 𓇋 on O. Ashmolean HO 1095 to the turnus of O. Glasgow D. 1925.80, the two ostraca indicate that the turnus was 45 days long. While there is no evidence against a turnus of 45 days long, there is not a single ostracon that records it in its entirety. O. Cairo SR 12218 might have contained all 45 workmen, but is not preserved well enough to prove the hypothetical turnus.[193] Yet, as there is no contradicting evidence, we will continue to consider a turnus of 45 days as plausible.

The hypothetical turnus is presented in the table below. When we compare the hypothetical 45 days turnus to the 30 days turnus of the reign of Ramesses IV, it becomes clear that several changes took place. The marks of workmen Harshire and Tasheri are no longer present, and 17 slots became available in the new turnus:

[193] With our knowledge of the sequence of the turnus from other marks we can estimate with reason that two marks were originally inscribed above mark 𓇋, two marks below mark 𓐍, three marks below mark 𓆑, two marks below mark 𓏲, and two marks below mark 𓂋. If O. Cairo SR 12218 was indeed originally inscribed with 45 different workmen's marks, this would mean that seven more marks were inscribed above mark 𓎟, which is a bit tight but not impossible considering the available space between mark 𓎟 and what must have been the top of the ostracon.

	Hypo-thetical Turnus	BM 50716	BTdK 541	Ashmolean HO 891	Cairo SR 12218
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

	Turnus Ramesses V	Turnus Ramesses IV
	Neferher	Neferher
	Amenemope	Amenemope
	Nesamun	Nesamun
	Khaemnun	Khaemnun
	Hori	Hori
	Neferhotep	Neferhotep
	Penanuqet	Penanuqet
	Khaemwaset	Khaemwaset
	Nakhtmin	Nakhtmin
	Reshupeteref	Reshupeteref
	Meryre	Meryre
	Mose	Mose
	Pamedunakht	Pamedunakht
	Weserhat	Weserhat
	Minkhau	Minkhau
	Iry-‘a	Iry-‘a
	Amennakht	Amennakht
	Iyerniutef	**Harshire**
	Amenhotep	**Iyerniutef**
	Pentaweret	**Nebnakht**
	Bakenamun	**Wesekhnemtet**
	Amenwa	**Pentaweret**
	Nebnakht	**Nakhemmut**
	Wesekhnemtet	**Amennakht**
	Maaninakhtuf	**Amennakht**
	Nakhemmut	**Tasheri**
	Amennakht	**Maaninakhtuf**
	Amennakht	**Amenhotep**
		Bakenamun
		Anynakht
	Anynakht	

TABLE 35. THE HYPOTHETICAL 45 DAYS TURNUS OF THE TIME OF RAMESSES V

3.2.7.4 The list of workmen's marks on O. Cairo JE 96328

Now that an attempt has been made to reconstruct the turnus, it becomes necessary to date the ostraca as precisely as possible and identify the workmen's marks. We expect the turnus to date somewhere in the reign of Ramesses V. Such a date is supported by O. Cairo JE 96328. We have already seen that the reverse of this piece merely records a day 15, but the obverse is highly interesting because it contains an ordered list of workmen's marks. Unfortunately the list is rather fragmentary and it does not provide new insights into the turnus. Indeed, it is only because of the fact that  follows mark that we can link the sequence to the duty rosters ensuing year 4 the reign of Ramesses IV. The more important information is concealed at the beginning of the list, which begins with  followed by  and  . The second mark is the hieratic form of the sign for the scribal set, *sš*, and its situation in the second position of an ordered list of workmen is of course remininscent of hieratic lists that are headed by the foreman, scribe and deputy.[194] This suspicion is confirmed by the fact that the third mark is that of Anynakht (i), who was indeed the deputy of the right side.[195] Consequently, mark must refer to the foreman of the right side. From the beginning of the reign of Ramesses IV to the end of the reign of Ramesses IX this position was held by Nakhemmut (vi). We had already noticed that Nakhemmut's mark  was used to designate Pamedunakht in turnus lists once he had taken over Nakhemmut's position in the duty roster at the moment of the latter's promotion to the position of chief workman.[196] It is therefore very well plausible that Nakhemmut, in his new capacity of foreman, used mark instead.

Nakhemmut served as the foreman of the right side for a long period of time and over the course of his career he was assisted by several subsequent deputies. Anynakht is thought to have been active as a deputy in or after year 2 of Ramesses V.[197] We thus have an approximate *terminus post quem* for the duty roster on the reverse of O. Cairo JE 96328, assuming that the list of workmen's marks on the reverse is contemporaneous. Ideally, we expect the associated duty rosters O. Glasgow D. 1925.80, ONL 6219, O. Ashmolean HO 1095, O. Ashmolean HO 1090 and O. Ashmolean HO 1078 to date to about the same period. These duty rosters therefore do not seem to date to the very beginning of the reign of Ramesses V. They cannot record the exact same turnus as preserved in O. Cairo CG 25609, dated – tentatively – to III – IV *šmw*, year 1 of Ramesses V. In that hieratic document Tasheri is still listed on *wrš* duty, but his mark has disappeared from duty roster O. Glasgow D. 1925.80 and associated pieces. These must therefore date to a later time.

3.2.7.5 The list of workmen's marks on O. BM 50716

That these duty rosters are not situated in the first year of the reign of Ramesses V is also suggested by the ordered list of workmen's marks recorded on the obverse of O. BM 50716 (TABLE 35), which must be dated somewhere between the duty rosters of year 4 of Ramesses IV and the ostraca of the hypothetical 45 days turnus. As in the list of O. Cairo JE 96328, the workmen's marks on O. BM 50716 are given in an ordered sequence headed by marks and for respectively the foreman Nakhemmut and the scribe of the tomb. Mark for the deputy Anynakht (i) is positioned in the fourth slot. In position three we find  , the mark of Harshire. Hieratic sources indicate that Harshire acted as a scribe alongside his father Amennakht (v), scribe of the tomb, as early as year 2 of Ramesses V.[198] There are however indications that Harshire had assumed the status of assistant scribe already at the end of the

[194] For such lists see chapter 4, 4.1.
[195] Davies, *Who's who*, 74.
[196] See above, 3.2.5.
[197] Davies, *Who's who*, 74.
[198] O. Berlin P 12654, cf. Davies, *Who's who*, 114.

reign of Ramesses IV.[199] His role as assistant to the scribe might explain why Harshire was apparantly exempted from *wrš* duties in e.g. O. Glasgow D. 1925.80, and why he is listed on O. BM 50716 immediately after the scribe of the tomb Amennakht (v). Even though O. BM 50716 must be earlier than the group of duty rosters to which O. Glasgow D 1925.80 belongs, we see that some changes in the order of workmen had already taken place. We encounter the mark  of a newcomer, and  already follows after . On the other hand, the mark of Tasheri,  , is still present in the list. Based on the fact that Anynakht is mentioned as deputy, the list should date to the beginning of the reign of Ramesses V, but it must be older than O. Glasgow D. 1925.80 and associated duty rosters, because of the presence of Tasheri.

O. BM 50716 is furthermore important because it demonstrates beyond any doubt that mark  , situated in the slot of Pamedunakht between marks  and  , is an allomorph of , the mark that is more frequently attested for this man.

3.2.7.6 O. Cairo CG 25609 and its relation to duty rosters composed with marks

Because ostraca such as O. Glasgow D. 1925.80, recording the hypothetical 45 days turnus, are probably later than year 1 of Ramesses V, hieratic ostracon Cairo CG 25609 is only of limited use in our attempt to identify the workmen behind the new workmen's marks we have come across. Nevertheless, O. Cairo CG 25609 provides important information concerning the workmen on duty. For example, it records the *wrš* duty of Amennakht (xxv) on day 7 and on day 8 that of a workman named Khonsu, whom we have not encountered in duty rosters composed with marks before. In contrast, the hypothetical 45 days turnus does not list an unknown workmen's mark for the slot following that of Amennakht (xxv). After his mark  we find mark  that we have attributed to Iyerniutef (iii). Since O. Cairo CG 25609 must be older than the ostraca recording the hypothetical 45 days turnus, it is plausible that in these documents mark did no longer refer to Iyerniutef (iii) but to Khonsu. Interestingly, Iyerniutef (iii) probably had a son called Khonsu, Davies' Khonsu (iv).[200] It is therefore reasonable to suggest that the latter had taken over his father's place in the duty rosters somewhere around year 1 of Ramesses V, and that he had inherited his father's mark as well.

Besides Khonsu, O. Cairo CG 25609 mentions several other novices in the duty roster. On day 12 an Amenwa is mentioned, who could be Amenwa (i) son of Hay (vii) or Amenwa (ii) son of an Amenpahapi. The Amenwa in O. Cairo CG 25609 does not occur in the turnus lists of the time of Ramesses III and Ramesses IV, but on O. Cairo CG 25609 his slot is situated between that of Bakenamun and Nebnakht. It is therefore possible that he is listed on O. Glasgow D. 1925.80 through mark  on day 28, after the mark of Bakenamun and before that of Nebnakht. Four other new workmen in the duty roster of O. Cairo CG 25609 are listed after the two Amennakhts and Tasheri: Pashedu, Pahemnetjer, Penmennefer and Penniut. This sequence of new workmen is significant, because in the hypothetical 45 days turnus we find 14 previously unattested marks after the slot of the two Amennakhts (TABLE 36). The sequence Pashedu – Pahemnetjer – Penmennefer – Penniut is attested in other hieratic sources as well. These documents do not contain duty rosters, but list workmen – more or less – according to the sequence of the turnus. For example, we find these four workmen in exactly that order in O. BTdK 621 and O. IFAO 1323. The first document is an account of the distribution of grain, attributed by Dorn to the reign of Ramesses IV,[201] and O. IFAO 1323 is a hieratic list of present and absent workmen, attributed to the same reign by Helck.[202] On each ostracon, the deputy of the right side Amenkha (i) is mentioned. He seems to have held

[199] Davies, *Who's who*, 115-116.
[200] Davies, *Who's who*, 55, 185.
[201] Dorn, *Arbeiterhütten*, 395.
[202] Helck, *Die datierten und datierbaren Ostraka*, 407-408.

this status at least until year 7 of Ramesses IV,[203] and he must have been succeeded by Heqamaatre-anerhat-Amun (i) sometime before or in year 2 of Ramesses V.[204] Both documents list several workmen in the exact same order of the turnus recorded in O. Cairo CG 25609, as can be seen in the table below. Tasheri is still mentioned in O. Cairo CG 25609 and in O. BTdK 621, which might be an indication that these accounts are older than the ostraca of the hypothetical 45 days turnus. However, when the lists of workmen in O. IFAO 1323, O. BTdK 621 and O. Cairo CG 25609 are juxtaposed, it becomes evident that they partially record the same sequence, a sequence which corresponds to the order of workmen's marks in our hypothetical 45 days turnus. They corroborate the length of the 45 days turnus, and do not provide evidence for a shorter of a longer turnus.

The correspondence with the workmen's marks is confirmed to a fair amount of certainty due to the fact that several newly attested marks are 'readible': workmen's mark  resembles the hieroglyph  *šd* and must refer to Pas*hed*u; mark  reads *ḥm-nṯr* for the workman Pa*hemnetjer*; mark  , or even in O. Cairo SR 12218, must be the pyramid (optionally with added *nfr*-sign), the determinative in the element *mn-nfr*, 'Memphis', in the name of Pen*mennefer*; and mark  must be interpreted as a cobra, for the workman Pen*rennut*. The mark that might have belonged to Penniut is unfortunately not preserved in any of the 45 days duty rosters.[205] According to O. IFAO 1323, Itefnefer and Hori were represented by marks  and respectively, but these identity marks are not evidently related to their names.

[203] O. DeM 207, cf. Davies, *Who's who*, 49.

[204] Theban Graffito nr. 1696, Jaroslav Černý and Abdel Aziz Sadek, *Graffiti de la Montagne Thébaine* III.1. *Fac-similés. Nos. 1578-1980.* CEDAE (Cairo 1970), pl. X; Jaroslav Černý and Abdel Aziz Sadek, *Graffiti de la Montagne Thébaine* IV.1. *Transcriptions et indices. Nos. 1578-2566.* CEDAE (Cairo 1970), 10, 74; cf. Davies, *Who's who*, 49.

[205] Coincidentally, the hypothetical 45 days turnus suggests that in O. Cairo CG 25609, the turnus continued after Khonsu on days 29 and 30 with workmen Amenhotep and Pentaweret, even though these days are recorded as inactive days.

	Hypothetical turnus	O. Cairo CG 25609	O. BTdK 621	O. IFAO 1323
	Neferher			
	Amenemope			
	Nesamun			
	Khaemnun			
	Hori			
	Neferhotep			
	Penanuqet			
	Khaemwaset			
	Nakhtmin			
	Reshupeteref			
	Meryre			
	Mose			
	Pamedunakht			
	Weserhat			
	Minkhau			
	Iry-‘a			
	Amennakht			
	Khonsu			
	Amenhotep			
	Pentaweret			
	Bakenamun	Bakenamun		
		Amenwa		
	Nebnakht	Nebnakht		
	Wesekhnemtet	Wesekhnemtet		
	Maaninakhtuf	Maaninakhtuf		
	Nakhemmut	Nakhemmut		
	Amennakht	Amennakht		
	Amennakht	Amennakht	Amennakht	
		Ta[sheri]	Tasheri	
		Pa[shedu]	Pashedu	Pashedu
		Pahemnetjer	Pahemnetjer	Pahemnetjer
		Penmennefer	Penmennefer	Penmennefer
?		Pen[niut]		Penniut
				Itefnefer
				Hori
				Penrennut
				
				
				
				
				
	Anynakht			

TABLE 36. THE HYPOTHETICAL 45 DAYS TURNUS COMPARED TO HIERATIC OSTRACA O. CAIRO CG 25609, O. BTDK 621 AND O. IFAO 1323

3.2.7.7 O. Cairo CG 25651 and the name list of O. IFAO 1323

More information about the two workmen Itefnefer and Hori is provided by another duty roster composed with marks, O. Cairo CG 25651. This fragmentary and enigmatic duty roster records days 12 to 22 of what we can assume is month I *šmw* of a year 1, thanks to a short hieratic inscription on the same piece. The inscription contains a date line that reads "Year 1, I *šmw*, day 12" and a note about the right side of the crew. It was previously attributed to the reign of Ramesses IV,[206] but such a date would not agree with the duty roster composed with marks on the same ostracon. It is likely that the hieratic text and the duty roster composed with marks belong to the same month, because a day 12 is mentioned in both inscriptions. Several of the workmen's marks in the roster are not attested in the turnus of Ramesses IV, but do occur in duty rosters such as O. Glasgow D. 1925.80 and O. Ashmolean HO 1095. Yet, the series of workmen's marks on O. Cairo CG 25651 is not fully in agreement with the sequence of the hypothetical turnus of 45 days. Instead, they correspond better to the hieratic list preserved in O. IFAO 1323. This becomes clear when the marks and the names in the two ostraca are placed side by side, as in the table below.

	Hypothetical turnus	**Cairo CG 25651**	**IFAO 1323**
…	…		
	Amennakht		
	Amennakht		
			
			Pashedu
			Pahemnetjer
			Penmennefer
?			Penniut
			Itefnefer
			Hori
			Penrennut
			Montusankh
			Nakhtamun
			Nebamun
			Nebnefer son of Mose
			Pakhyamun
			Qes
			
			
			

TABLE 37. O. CAIRO CG 25651 COMPARED TO O. IFAO 1323

As a point of departure we can take mark , which according to a comparison of the hypothetical turnus and O. IFAO 1323 represents Itefnefer. Aligning the two lists at his mark offers interesting insights. The next mark in O. Cairo CG 25651 is , which we know to have belonged to Hori. Indeed, it is a workman named Hori who is listed in O. IFAO 1323 after Itefnefer. Mark corresponds again to the name of Penrennut. Unfortunately, the next two marks in O. Cairo CG 25651 are not clear. The facsimile seems to present a single mark for days 15 and 16, which would not be very logical. Whatever the reason for this, we might be able to pick up the sequence on day 17. Identifying the mark for this day is not without its

[206] *KRI* VI, 104-105; Helck, *Die datierten und datierbaren Ostraka*, 363.

own problems, because days 16 and 17 are written so close to each other that it is not clear which marks are connected with which days. It would seem that after day 17 a mark follows that consists of two elements:  . Such a reading is controversial because the facsimile of the ostracon does not clearly display a mark for day 16. At a first glance one may therefore be inclined to take sign as the mark for day 16 and as the mark for day 17. Alternatively, we may propose that what is rendered as sign in Černý's drawing consists in fact of two separate marks for days 15 and 16. Indeed, this mark is not attested elsewhere.[207] We may thus be correct in interpreting the signs following day 17 as a single mark. This workmen's mark seems to be a construct of the mark for Weskhnemtet and something that looks like a plant. According to the list of O. IFAO 1323, this is the workman Nebamun. Because of the element in the mark, it is well possible that this Nebamun is Davies' Nebamun (iv), son of Wesekhnemtet (i). The next mark on day 18 also consists of two elements, of which the sign is the most evident: it is the mark we have come to know as that of Mose (iv). The element left of resembles the hieratic sign for (Gardiner G 37).[208] Significantly, O. IFAO 1323 lists a workman Nebnefer for this slot, who is mentioned with the filliation "son of Mose". This workman can only be Davies' Nebnefer (xviii). Both Nebamun and Nebnefer appear to have inherited their father's mark but added an extra element to it, perhaps for better distinction. Alternatively it may have been the scribe of the ostracon who added these elements to the identity marks in order to denote Nebamun and Nebnefer. In the case of , the added element could be interpreted as an abbreviated form of the word *šri*, which can be used to describe one's (younger) son.[209]

The identity of the workman behind the next mark is not determinable as straightforwardly. It is mark connected with day 19 on O. Cairo CG 25651, which corresponds to Pakhayamun according to O. IFAO 1323. Davies discerned two individuals by this name, although it transpires from his comments that the possibility exists that they are one and the same person.[210] The distinction between Pakhayamun (i) and Pakhayamun (ii) depends on the interpretation of Theban Graffito 3744, which mentions a Pakhayamun as the brother (*sn*) of scribe Paneferemdjedu. This Paneferemdjedu in turn could be Paneferemdjedu (i), son of Amennakht (v), although the graffito can be read in such a way that Paneferemdjedu is another scribe, Paneferemdjedu (ii) son of Menna (i). In the latter case, Pakhayamun would be a son of Menna (i) as well, while in the former case he would be a son of Amennakht (v). The mark that presumably refers to Pakhayamun resembles that of Amennakht (xxv), , but there are no reasons to believe that Amennakht (xxv) and Amennakht (v) are one and the same person.

The mark connected with day 20 is , and the corresponding entry in O. IFAO 1323 is that of the rather obscure workman Qes.[211] Although it cannot be proven, it is perhaps more logical to connect this workmen not with mark on O. Cairo CG 25651 but with the mark that follows it in the hypothetical turnus, mark , which represents (Gardiner sign T 19) with

[207] We will encounter a similar mark on O. ARTP 99/27 used for a workman of the left side in the reign of Ramesses IV, but this mark is of a different shape: whereas the drawing on O. Cairo CG 25651 displays what seems to be a jar with a handle on the upper part of the vessel, the jar-shaped mark on O. ARTP 99/27 might display a handle at the lower part. Whether this is a handle at all is not clear. The author of this ostracon evidently had difficulties drawing some his marks (see chapter 4, 4.4) and the stroke of ink interpreted as a handle may in fact be a second attempt to draw a rounded jar body.

[208] Georg Möller, *Hieratische Paläographie. Die aegyptische Buchschrift in ihrer Entwicklung von der fünften Dynastie bis zur römischen Kaiserzeit.* Zweiter Band. *Von der Zeit Thutmosis' III bis zum Ende der Einundzwanzigsten Dynastie. Zweiten verbesserten Auflage* (Osnabrück 1927), 17, nr. 197.

[209] E.g. O. Ashmolean HO 1945.39, obverse 20-21; P. Turin Cat. 1945, rto., col. IV, 4, as kindly suggested by Kathrin Gabler, personal communication, 2014. See also O. Ashmolean HO 207.

[210] Davies, *Who's who*, 109, n. 346.

[211] Cf. Dorn, *Arbeiterhütten*, 407.

the phonetic value *qs*. The workman Qes is not discussed in Davies' *Who's who*, but he occurs on a small number of ostraca from the first half of the 20th Dynasty.[212] Coincidentally, he is mentioned on O. Brussels E 301 as the son of an Amennakht as well, making it tempting to see Qes as a brother of Pakhayamun.

In summary, the sequence of workmen on O. Cairo CG 25651 is to some extent similar to that of O. IFAO 1323. We may place O. Cairo CG 25651 in year 1 of Ramesses V based on its relation to O. IFAO 1323, which through the mention of the deputy Amenkha cannot be later than year 2 of Ramesses V. Since Harshire is still mentioned among the workmen of the right side in O. IFAO 1323, he might have been listed in the duty roster of O. Cairo CG 25651, but he seems to have been exempted from duty as early as IV *šmw* of year 1, as he is no longer mentioned in his slot following that of Amennakht.

This observation has little influence on the date of O. Cairo CG 25651, but we are unable to determine if the duty roster recorded in the ostracon is part of a turnus of 45 days, of 30 days, or of an unattested turnus of a completely different length. It has already been established that the sequence of marks on O. Cairo CG 25651 is not exactly the same as that of the hypothetical 45 days turnus. We discover another discrepancy with this turnus when we examine the position of workman Penniut. In to the hypothetical turnus of 45 days the slot of Penniut is followed by that of Itefnefer. The latter is attested in O. Cairo CG 25651 on day 12 of I *šmw*, meaning that, if the duty roster of O. Cairo CG 25651 is also governed by the hypothetical 45 days turnus, Penniut would have served his *wrš* duty on day 11 of that month (see the table below). Subsequently Penniut would have been on duty on day 26 of II *šmw* and on day 11 in IV *šmw*.

However, hieratic ostracon O. Cairo CG 25609 records not Penniut but Bakenamun on duty on IV *šmw*, day 11, while Penniut is listed on day 26 of this month (see the table below). Hence, no evidence for a turnus of 45 days comes directly to the fore. On the other hand, it has already been pointed out that in the hieratic journal text of O. Cairo CG 25609 several days of the duty roster are passed over, as there was apparently no one on duty (III *šmw*, days 19-21, 29-30; IV *šmw*, days 1-2, 15, 19-20). On a total of nine days no *wrš* tasks were performed, meaning that theoretically Penniut's *wrš* duty should have been not on day 26 but 17 of IV *šmw*. But that is still six days later than what the hypothetical 45 days turnus indicates. We may counter this discrepancy by proposing that in the period preceding the roster of O. Cairo CG 25609 six additional days in the duty roster were skipped, but that would be mere speculation. Alternatively, the duty roster attested on O. Cairo CG 25651 may not have been 45 days long.

	I *šmw* as recorded by CG 25651 (marks)	**II *šmw***	**III *šmw* as recorded by CG 25609 (hieratic)**	**IV *šmw* as recorded by CG 25609 (hieratic)**
Day 1				-
Day 2				-
Day 3				Pamedunakht
Day 4				Weserhat
Day 5				[Minkhau]
Day 6				[Iry-ʿa]
Day 7				{Pa-}Amennakht
Day 8				Khonsu
Day 9				[Amenhotep]

[212] Dorn, *Arbeiterhütten*, 407, n. 869.

Day 10				[Pentaweret]
Day 11	[Penniut ?]			Bakenamun
Day 12	Itefnefer			Amenwa
Day 13	Hori			Nebnakht
Day 14	Penrennut			Wesekhnemtet
Day 15	?			-
Day 16	?			Maaninakhtuf
Day 17	Nebamun			Nakhemmut
Day 18	Nebnefer son of Mose		Hori	Amennakht
Day 19	Pakhyamun		-	-
Day 20	?		-	-
Day 21			-	Amennakht
Day 22			Nefer[hotep]	Ta[sheri]
Day 23			[Penanuqet]	Pa[shedu]
Day 24			[Khaemwaset]	Pahemnetjer
Day 25			[Nakhtmin]	Penmennefer
Day 26			[Reshupeteref]	Pen[niut]
Day 27			[Meryre]	
Day 28			{Pa-}Mose	
Day 29			-	
Day 30			-	

TABLE 38. I-IV *Šmw* OF YEAR 1, RAMESSES V RECONSTRUCTED THROUGH O. CAIRO CG 25651 AND CG 25609

Another issue concerns the position of mark  for Hori in O. Cairo CG 25651. It is not clear who exactly this Hori is. The most straightforward answer to that question would be to suggest that it is our Hori (ii) = (iii) who was represented by this mark in the duty rosters of the reigns of Ramesses III and Ramesses IV. The mark for the following slot belongs to Itefnefer (I), who is attested as the son of a Hori, but it is not exactly clear which workman of that name.[213] Strangely enough, both in the duty roster of year 6 of Ramesses IV,[214] which assumingly predates O. Cairo CG 25651, and in the reconstructed 45 days turnus,[215] which, as we have argued, must date to a period after O. Cairo CG 25651, the slot of Hori (ii) = (iii) is situated between that of Khaemnun and Neferhotep. Dating O. Cairo CG 25651 to year 1 of Ramesses V would thus imply that Hori's position in the turnus moved down to the lower ranks of the sequence of the turnus in year 1 of Ramesses V, only to move back some years later to his original slot. Alternatively, we may see in mark another workman named Hori, but in this scenario two workmen of the same name would be represented by the very same mark in the duty rosters. Moreover, this suggestion would mean that the new Hori would have entered the turnus no earlier than year 4, and probably after year 6 of Ramesses IV, to stay a mere year or two and to disappear at the time of the hypothetical 45 days turnus. The same would be true for the workmen represented by  , and , who are no longer present in the reconstructed 45 days turnus either.

One may suggest that it is therefore more sensible to date O. Cairo CG 25651 to a time after the 45 days turnus had been abandoned, but that would be in conflict with our argumentation concerning the date recorded on this piece. The only other explanation is that the ostraca of the hypothetical 45 days turnus are in fact later than the duty roster composed

[213] Itefnefer is not mentioned in Davies, *Who's who*, but see Gutgesell, *Die Datierung* I, 281; Dorn, *Arbeiterhütter*, 434-435, O. BTdK 703 and O. BTdK 704.
[214] O. UC 31939.
[215] E.g. O. Glasgow D. 1925.80.

with marks on O. Cairo CG 25651 because Harshire is still present in O. IFAO 1323, which overlaps well with O. Cairo CG 25651 and which mentions the deputy Amenkha (i). In contrast, the ostraca of the hypothetical 45 days turnus no longer include the mark of Harshire. They are also well in agreement with the sequence of marks on O. BM 50716. This piece does not list Harshire in his original position between Amennakht and Iyerniutef either, and it mentions the deputy Anynakht, a succecor of Amenkha. The conclusion must thus be that we need to accept the odd position of the mark of Hori in I *šmw* of year 1 of Ramesses V, and that several new workmen only served in the duty rosters for a rather short period. The turnus recorded by O. Cairo CG 25651 could then well have been shorter than 45 days.

3.2.7.8 O. OIM 19125, O. Cairo CG 25651 and related duty rosters

The attribution of O. Cairo CG 25651 to a time before the introduction of the 45 days turnus known from O. Glasgow D. 1925.80 and associated ostraca is supported by O. OIM 19125. On the reverse of this ostracon we encounter a mark that is very similar to  and on O. Cairo CG 25651: the mark , which consists of mark for Wesekhnemtet to which the (assumed) hieratic sign for has been added, probably as a variant for , which we have interpreted as designation of Nebamun (iv), son of Wesekhnemtet (i). Because this mark, and hence the workman Nebamun, seems to be absent in the duty roster of O. Glasgow D. 1925.80 and associated pieces, O. OIM 19125 should date close to O. Cairo CG 25651. Interestingly, the mark of Harshire is listed on the obverse of O. OIM 19125 on day 11. According to hieratic ostracon O. Cairo CG 25609, Harshire was no longer listed in the duty roster of IV *šmw* in year 1 of the reign of Ramesses V. It follows that O. OIM 19125 must date to a time prior to this month and, by association, O. Cairo CG 25651 as well. Still, the sequence of the marks in the duty roster of O. OIM 25651 is rather different from that of O. Cairo CG 25651. The turnus of the end of the reign of Ramesses IV and the very first months of the reign of Ramesses V thus must have seen quite some shifts. We can argue however that already in O. OIM 19125 the hypothetical turnus of 45 days is recognisable. Above the entry of day 11, the mark of Iyerniutef or rather his son Khonsu is visible, and we may assume it was connected with day 10. This mark immediately precedes that of Amenhotep, , in the hypothetical 45 days turnus, while it is connected with day 12 in O. OIM 19125. It thus seems that the sequence Iyerniutef – Amenhotep in the hypothetical turnus of 45 days is the result of the disappearance of Harshire, originally situated in between the two. In the 45 days turnus, the difference between mark and is 21 days. The latter mark is recorded on the reverse of O. OIM 19125 on day 11. If we now speculate that the month in which is recorded on day 10 was followed by five epagomenal days, then the reverse, with on day 11 would be exactly one cycle of 45 days later. As a consequence, the obverse of O. OIM 19125 should date to IV *šmw* of a year preceding the first regnal year of Ramesses V. Years 7 and perhaps 6 of the reign of Ramesses IV are most plausible.

Apart from O. OIM 19125 and O. Cairo CG 25651, ostracon ONL 323 contains a fragmentary duty roster that most likely predates O. Glasgow D. 1925.80 and associated ostraca. Only four marks are preserved on this ostracon, which represent new workmen who were added to the bottom of the turnus lists either at the end of the reign of Ramesses IV or the beginning of the reign of Ramesses V. For what must be day 27 we encounter mark , which we have assigned to Itefnefer, and for day 28 the mark . The same sequence is recorded in O. Ashmolean HO 1095, but in that document the marks are connected with days 10 and 11. The duty roster of ONL 323 thus is not evidently related to the hypothetical 45 days turnus that seems to be attested in O. Ashmolean HO 1095. ONL 323 continues with days 29 and 30, with which the marks and are connected. We recognise these marks from O. Cairo CG 25651, where mark is situated between these two identity marks. We may thus propose that ONL 323 is to be dated in a period after O. Cairo CG 25651, which still

includes  , but before the hypothetical 45 days turnus, where but also  and  are no longer listed.

O. OIM 19125 and O. Cairo CG 25651 can thus be pinpointed to the very end of the reign of Ramesses IV and the beginning of the reign of Ramesses V respectively. Unfortunately there are six other ostraca that record duty rosters from some time after year 4 of Ramesses IV which are much more difficult to date (TABLE 39). The first one is O. Ashmolean HO 1081. It conforms rather well to the hypothetical 45 days turnus until day 15. On days 13 and 14 the identity marks  of Amennakht (xxvi) and  of Amennakht (ix) are listed. The difference between the duty roster of O. Ashmolean HO 1081 and that of O. Glasgow D. 1925.80 is thus 10 days. Therefore at least one cycle of epagomenal days must have taken place in the period of time between both ostraca, provided that both duty rosters adhere to the hypothetical 45 days turnus. After day 14 we expect mark  on day 15 on O. Ashmolean HO 1081, but instead the space after day 15 was left empty. It seems that day 15 was passed over, because the mark does appear on day 16, and traces indicate that mark  could have been added to day 17. To make matters worse, the reverse of O. Asmolean HO 1081 records marks  and on days 29 and 30, although we would expect them on days 22 and 23 according to the hypothetical 45 days turnus. It would thus seem that after day 17 more days were passed over. As in hieratic ostracon Cairo CG 25609, *wrš* duties were apparently no longer performed on every day of the month at the time of O. Asmolean HO 1081.

A duty roster similar to that of O. Ashmolean HO 1081 is O. Ashmolean HO 1091. The latter ostracon records marks  , , and on days 25-28. The difference between this duty roster and that of O. Glasgow D. 1925.80 is thus 25 days, or at least one cycle of epagomenal days plus one month. However, the preceding days 1-7 are not in accord with the hypothetical 45 days turnus. The mark of Neferher for example is listed on day 7 in O. Glasgow D. 1925.80. In the 45 days turnus his mark can therefore only appear on days 2, 7, 12, 17, 22 or 27. Yet, in O. Ashmolean HO 1091 his mark is recorded on a day 1. On this ostracon the difference between the position of Neferher and that of Wesekhnemtet is 24 days, while it should be 23 days according to the 45 days turnus. Another change could thus have taken place in the turnus, but O. Ashmolean HO 1091 is too fragmentary to indicate what had happened exactly. We encounter comparable difficulties in the duty roster of O. Ashmolean HO 1083. On the reverse we find mark of Nesamun for day 10, and for days 15 and 16 the marks and of Khaemwaset and Nakhtmin are given. All three workmen are thus scheduled one day later than in the duty roster of O. Glasgow D. 1925.80 but occur in the same relative position, which means that either on one particular day of the month no *wrš* duty had been scheduled, or that O. Ashmolean HO 1083 does not record a 45 days turnus at all. The latter option can be countered by looking at day 14 on the obverse, which is connected with the mark , presumably of Amenwa. According to the hypothetical 45 days turnus Nakhtmin and Amenwa are 13 days removed from each other. This means that if the duty roster of O. Ashmolean HO 1083 is governed by the same turnus of 45 days, the day 14 that mentions Amenwa is either one cycle of 45 days earlier than that of the day 16 with Nakhtmin, or two cycles of 45 days later. The position of Amenwa thus fits perfectly into the hypothetical 45 days turnus, but those of Pahemnetjer on day 15 and of Penanuqet on day 27 do not match at all. In the duty roster of O. Ashmolean HO 1083 Pahemnetjer immediately follows Amenwa, while they are nine days apart in the hypothetical 45 days turnus. Some alternations must have occurred in the duty roster, but we cannot be sure what changed exactly.

The downward movement of mark in the sequence of the turnus may already be visible in the duty roster of O. Ashmolean HO 891. The obverse of this ostracon displays two columns of workmen in which the sequence of the hypothetical 45 days turnus can be recognised. It is therefore very plausible that the duty roster on the reverse dates somewhere

after year 4 of Ramesses IV. That is also suggested by the presence of mark  , belonging to the workman who appears to have replaced Tasheri some time in or after year 1 of Ramesses V. Yet, the duty roster of O. Ashmolean HO 891 contains a sequence of workmen that is different from the 45 days turnus. The only legible entries concern days 14, 16, 18, 20, 22 and 24. Day 14 is occupied by the mark of Weserhat, who is listed in O. Glasgow D. 1925.80 on day 20. The difference between the position of Weserhat in these two documents is thus six days, meaning that O. Ashmolean HO 891 follows a turnus that does not coincide with the 45 days turnus of O. Glasgow D. 1925.80 and associated pieces, unless of course four days were somehow passed over. The relative sequence of the marks mentioned on days 12-20 of O. Ashmolean HO 891 are however in accordance with that of the 45 days turnus, but on day 22 it records mark  . We would expect the mark  of Amenwa in this position, but apparently mark , presumably of Penanuqet, had shifted downwards from its original slot. The mark on day 24 appears to be  , the mark of Nebnakht, who, according to the 45 days turnus, was on duty one day earlier.

The reverse of O. BM 50731 is likewise difficult to interpret, and may in fact be a great deal later than the ostraca of the 45 days turnus. It should date no earlier than year 7 of Ramesses IV, based in the ordered list of the entire right side of the crew written on the obverse of the piece.[216] In the third slot of this list, which is the position of the deputy we observe  , the mark of Anynakht. The duty roster on the reverse is very fragmentary. It appears to record marks  and  on day 22 and perhaps 23. This sequence conforms to the 45 days turnus, but the following mark  does not. Moreover, marks and should have been listed on days 15 and 16 in O. Glasgow D. 1925.80, so their presence on days 22 and 23 in O. BM 50731 does not agree with the order of the 45 days turnus. The divergence from the 45 days turnus is probably explained by the fact that the document dates to a different period. As will be demonstrated below, the list of workmen on the obverse is attributed to a period after year four of Ramesses VI.[217] It may thus be one of the latest duty rosters of the right side composed with marks.

Similarly, the fragmentary duty roster of ONL 6320 does not correspond perfectly to the hypothetical 45 days turnus. The obverse lists marks  ,  and in a sequence that corresponds with the 45 days turnus, but the marks are connected with days 17, 18 and 19, which are not (multiples of) five days removed from the day numbers recorded for these marks in O. Glasgow D. 1925.80 and associated ostraca. The reverse of ONL 6320 records  on day 29 and probably mark  on day 30. According to the 45 days turnus, and immediately follow after marks , and , which would mean that in ONL 6320 we would expect on day 20, and one cycle of 45 days later on day 5. We may propose that a cycle of five epagomenal days need to be appended to the month in which , and are recorded, in which case mark should have appeared on day 30. Yet, it is entered for day 29, one day earlier, and we cannot explain why this is so or to what period ONL 6320 dates exactly.

[216] For the list on the obverse see chapter 4, 4.2.1.
[217] Ibidem.

Hypo-thetical Turnus	Ashmolean HO 1081	Ashmolean HO 1091	Ashmolean HO 1083	Ashmolean HO 891	BM 50731	ONL 6320
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						
						

TABLE 39. OSTRACA WITH MARKS RECORDING THE DUTY ROSTER OF RAMESSES V, POST YEAR 2

Overview of duty rosters composed with marks dated to the very end of the reign of Ramesses IV, the reign of Ramesses V or later

O. OIM 19125	IV *šmw*, year 7 or 6, Ramesses IV
O. Cairo CG 25651	I *šmw*, year 1, Ramesses V
ONL 323	c. year 1 – 2 Ramesses V
O. Glasgow D. 1925.80	c. year 2, Ramesses V or later
O. Cairo JE 96328	c. year 2, Ramesses V or later
ONL 6219	c. year 2, Ramesses V or later
O. Ashmolean HO 1095	c. year 2, Ramesses V or later
O. Ashmolean HO 1090	c. year 2, Ramesses V or later
O. Ashmolean HO 1078	c. year 2, Ramesses V or later
O. Ashmolean HO 1081	probably after year 2, Ramesses V
O. Ashmolean HO 1091	probably after year 2, Ramesses V
O. Ashmolean HO 1083	probably after year 2, Ramesses V
O. Ashmolean HO 891	probably after year 2, Ramesses V
O. BM EA 50731	probably after year 2, Ramesses V
ONL 6320	probably after year 2, Ramesses V

Overview of duty roster composed with marks which cannot be accurately dated

O. Ashmolean HO 941	R. III, year 28, II-III *šmw*; year 29, II-III *šmw*; I-II *ꜣḫ.t*; year 31, III-IV *šmw*; II-III *ꜣḫ.t*; or Ramesses V
O. IFAO 876	unclear, very fragmentary
ONL 303	unclear, very fragmentary
ONL 304	unclear, very fragmentary
ONL 306+	R. III, year 24, II *šmw*; I *ꜣḫ.t*; year 26, III *šmw*; II *ꜣḫ.t*; year 29, IV *šmw*; III *ꜣḫ.t*
ONL 308	unclear, very fragmentary
ONL 613	unclear, very fragmentary
ONL 1066	no workmen's marks preserved
ONL 1639	unclear, very fragmentary[218]
ONL 6267	unclear, very fragmentary
ONL 6284	R. III, year 25, IV *šmw*; III *ꜣḫ.t*; or perhaps R. IV or later?
ONL 6523	unclear, very fragmentary
ONL 6729	no day number, nor workmen's marks
ONL 6730	unclear, very fragmentary
O. Strasbourg H 13[219]	R. III, year 26, I *šmw*; year 28, II *šmw*; year 29, II *šmw*; I *ꜣḫ.t*
O. Turin N. 57302	R. III, year 26, I *šmw*; year 29, II *šmw*; I *ꜣḫ.t*; year 31, II *ꜣḫ.t*; R. IV, year 6

Overview of identified workmen's marks

	Amenemope (x)
	Amenhotep (vi)
	Amennakht (ix) "Kar"
	Amennakht (xxv)

[218] Possible related to ONL 325.
[219] Perhaps originally part of ONL 322+.

 Amennakht (xxvi) “Sedet”
 Anynakht (i)
 Bakenamun (i)
 Harshire (i)
 Hori (ii) = (iii)
 Huynefer (xi) = (v)[220]
 Iniherkhau (ii) ?
 Irsu[221]
 Iry-‘a (i)
 Itefnefer (I) son of Hori (ii) = (iii)[222]
 Iyerniutef (iii)
 Kasa (v)/(vi)
 Khaemnun (i)
 Khaemope (iv) ?
 Khaemwaset (iii)
 Khonsu (iv)
 Maaninakhtuf (iii)
 Menna (i)
 Meryre (v)
 Meryre (vi)
 Minkhau (i)
 Mose (iv)
 Nakhemmut (ii)
 Nakhemmut (vi)
 Nakhemmut (vi) as foreman of the right side
 Nakhtmin (vi)
 and Nebamun (iv)
 Nebnakht (viii)
 Nebnefer (xviii)
 Neferher (vi)
 Neferhotep (ii) ?
 Neferhotep (xi)
 Neferhotep (xii)
 Nesamun (III)
 Pahemnetjer (ii)
 Pakhiamun (i) ?
 Pamedu(netjer)nakht (i) “Pasen”
 Pashedu[223]
 Penamun (iv) = (iii)
 Penanuqet (iii)
 and Penmennefer (II)[224]
 Penrennut (i)
 Pentaweret (iv)
 Pentaweret (vii) ?

[220] Perhaps identical to Huynefer (v), see chapter 5, Excursus IV.
[221] Not in Davies, *Who’s who*; see Collier, ‘Integrating Hieratic and Marks Data’, [3; 4].
[222] Not mentioned in Davies, *Who’s who*, but see Dorn, *Arbeiterhütten*, 435.
[223] A very common name. Dorn, *Arbeiterhütten*, 396 lists three plausible identifications, of which Pashedu (xvi) might be the most probable one, cf. O. BTdK 622.
[224] Not mentioned in Davies, *Who’s who*, but see Dorn, *Arbeiterhütten*, 196.

 Qenna (i)
 Qes (I)[225]
 Reshupeteref (i)
 Scribe of the Tomb (Amennakht (v) ?)
 Tasheri = Ta (i)
 Wesekhnemtet (i)
 Weserhat (ii)

3.2.8 Ostraca with marks attributable to the reign of Ramesses V

The analysis of the duty rosters from the time of Ramesses V provide sufficient information to in interpret other ostraca with marks as documents that record the right side of the crew during this period. They are discussed in Appendix I, § 9.

3.3 DUTY AND DELIVERY RECORDS COMPOSED WITH MARKS AND THEIR RELATION TO HIERATIC DUTY AND DELIVERY TEXTS

In this section we will spend ample time on an examination of the duty and delivery texts composed with marks. Their sheer number indicates that such ostraca constitute an important type of documents that was relatively frequently created during the reigns of Ramesses III – Ramesses V. More importantly, the existence of hieratic documents that record very similar data provides a unique opportunity for extensive research on the purpose of such ostraca with marks and of the role played by the author of these documents.

3.3.1 Introduction

Our corpus of documents composed with workmen's marks recording deliveries and the *wrš* duty roster contains 80 ostraca, ranging from large pieces to very small fragments. Generally, duty rosters composed with marks are lists of entries for each day of the month. As mentioned above, a regnal year or a month designation is mostly added near the first entry of a specific month. This day is not always preserved in the ostraca of our current corpus, so it is well possible that more ostraca were originally headed by a year number. There are 42 instances where the first entry of the month is preserved.[226] In two instances it is unclear whether a year number or a month designation was inscribed because of damage to the ostracon. In nine instances[227] (21.4%) both a year number and a month designation are preserved. In three more instances (7.1%) a year number was recorded on the ostracon and a month sign might have been added, but is no longer preserved because of damage or weathering of the ostracon. In two cases (4.7%) only a year number is added to the document. There are 16 instances[228] (38.1%) in which only a month designation is recorded. In 10 cases[229] (23.8%) the year or month is not specified.

The duty rosters composed with marks record for each day the deliveries transferred by the *smd.t* personnel to the community of workmen. These provisions are recorded using signs that are sometimes borrowed from or inspired by hieroglyphic or hieratic script. The quantities of these commodities are always given in hieratic numerals. Additionally, the duty rosters feature signs that indicate a particular side of the crew,  and  , as well as marks that refer to *smd.t* agents. The marks for *smd.t* members are almost exclusively attested for deliveries of quantities of wood and fish. Within the available corpus of duty rosters

[225] Not mentioned in Daives, *Who's who*, but see Dorn, *Arbeiterhütten*, 407, n. 869.
[226] This includes ostraca recording deliveries of a single day only, as well as ostraca recording deliveries on days other than day 1, such as ONL 316, which begins with day 23.
[227] Three instances are not entirely certain.
[228] Two instances are not entirely certain.
[229] Four instances are not entirely certain.

composed with marks, 208 wood deliveries are well enough preserved to determine whether a *smd.t* member is recorded or not. Of this total, 161 deliveries (77.4%) mention the *smd.t* member responsible for the delivery, and perhaps seven more deliveries; no individual is connected with the remaining 40 deliveries. Woodcutters are thus recorded in more than three quarters of all wood deliveries. In contrast, fishermen are rather infrequently connected with quantities of fish in the duty rosters composed with marks. Of a total of 56 fish deliveries that are well enough preserved to ascertain whether a fisherman is recorded or not, such an individual is mentioned in only 17 instances (30.4%) and perhaps in one more entry; for 37, perhaps 38 deliveries of fish no mention is made of a *smd.t* member. It is not clear why, relatively speaking, woodcutters are more frequently recorded than fishermen, but an explanation might be that woodcutters were closer related to the community of Deir el-Medina than fishermen.[230]

The ostraca inscribed with marks under discussion here are all duty and delivery texts: they record the delivery of goods as well as the workmen who were on *wrš* duty. With a few exceptions, which are at this point still poorly understood, the ostraca do not record any other information. In contrast to the hieratic documentation, there are no ostraca with marks from the first half of the 20th Dynasty that record the deliveries and/or deficits of a single *smd.t* member or a single commodity in the format of a journal text.[231]

The hieratic sign 𓏲, *ḏꜣ* for *wḏꜣ.t*, is used in delivery texts with marks to note down deficits. Deficits are recorded in 14 different ostraca with marks,[232] dating from year 20 of Ramesses III to year 1 of Ramesses V. Documentation of deficits of wood deliveries is well known from hieratic records, and once again we notice how closely related the delivery texts written with marks are to those written in hieratic.

The inclusion of the duty roster is a characteristic of ostraca from the first half of the 20th Dynasty with marks that record deliveries, and this indicates that these documents must have been made first and foremost for members of the workmen's community and those of the right side of the crew in particular. No other institution would have been as concerned with the duty roster as the workmen themselves. First of all it seems improbable that the members of the *smd.t* personnel, supposing for a moment that they would have kept records of their deliveries in the first place, would have been bothered with keeping track of the identity of the workmen to which they had handed over their deliveries. We can also rule out that the ostraca with workmen's marks would have been understood by the scribes of the vizier. Even if they could have been able to decipher ostraca with marks, it is unlikely these scribes were concerned with such documents. That is suggested by hieratic P. Turin Cat. 1946 + 1949 vso. I, a document of deliveries, labour, and lamps from the beginning of the reign of Ramesses IV. It has been argued – with reason – that the data contained in the papyrus were compiled from different hieratic ostraca, one of which (O. DeM 39+) records the duty roster for III *šmw*. The papyrus, or a copy or extract of it, in turn was destined to be sent to higher officials at Thebes.[233] Interestingly, the duty roster that must have been available to the scribe of P. Turin Cat. 1946 + 1949 vso. I was omitted from the papyrus, probably because "nobody in the central administration would have been interested in this particular information".[234] The

[230] Another possible explanation is that the scribe was more concerned with deficits of wood deliveries. See below, p. 231.
[231] Examples of such records from the domain of the hieratic administration are O. Strasbourg H 26 (exclusively pottery), O. DeM 152 (exclusively firewood) and O. Leipzig Inv. No. 1903 (exlusively fish).
[232] O. Fitzwilliam EGA 6120.1943; ONL 332 obverse; ONL 317+; O. Ashmolean HO 1086; ONL 322+; ONL 337; ONL 340; ONL 318+; O. Cairo SR 12165; O. Ashmolean HO 1093; O. Glasgow D. 1925.80; ONL 6267; ONL 6523; O. Strasbourg H 13.
[233] Summarised and elucidated by Donker van Heel, 'Drafts', 35-37.
[234] Donker van Heel, 'Drafts', 36.

duty rosters with marks are therefore evidently part of the administration of the Deir el-Medina community, and were the creations of some of its inhabitants.

As noted, documents with a year and/or a month designation are more frequent than those without. Such dates are quite remarkable considering the seemingly informal character of ostraca composed with marks. Yet, the addition of a date appears to have been recorded on a regular basis and must have had some importance. We may interpret such dates as indications that the ostraca were kept and perhaps reviewed over a longer period of time, rather than being discarded after having been composed. The addition of regnal year numbers would suggest that such ostraca were kept for several months.

We may expect ostraca with marks that record deliveries to have been written for and most probably also by a member of the community of necropolis workmen. Not only would it be mostly in the interest of the Deir el-Medina inhabitants to record deficits of deliveries, one would also expect the individual responsible for recording deficits to have access to earlier administration of deliveries. In most cases no commodity is given for the deficit, but when it is, it most frequently concerns wood. As mentioned above, signs for woodcutters occur much more frequently than signs for fishermen. One of the reasons to keep track of the deliveries of different woodcutters could have been the possibility to calculate their deficits at a later point.

3.3.2 Attestations

We have established that the earliest duty rosters composed with marks date to a period before year 24 of the reign of Ramesses III, and might be as early as year 20.[235] The last securely dated duty roster with marks dates to year 1 of Ramesses V, although there are several duty rosters that must date to a later point in his reign. The documents record deliveries for parts of a month, an entire month, or multiple successive months. Notably, we do not possess two different ostraca with marks that record deliveries for one and the same day. We do know of two pairs of ostraca that deal with the same month. Ostraca Ashmolean HO 1084 and ONL 6222 both document deliveries for IV *šmw* of year 30 in the reign of Ramesses III. The former ostracon however records entries for days 3 – 22 of this month, and perhaps a few more days now lost. The latter ostracon, ONL 6222, exclusively records deliveries of the last weekend[236] of the same month, and therefore seems to merely complement O. Ashmolean HO 1084. We observe the same phenomenon examining the pair O. Ashmolean HO 1088 and O. UC 31967 (TABLE 40). The latter ostracon appears to record day entries for two, perhaps three different months. These entries are written in different sections, separated from each other by dividing lines and by different orientations of writing. In order to distinguish the months, a month designation has been added to two of the sections. As such, the entries on the obverse for days 2 – 5, days 10 – 12 and 23 – 28 are those of III *pr.t* of year 3 of Ramesses IV. Days 25 and 26 are repeated on the obverse, but belong to a perpendicularly written section, and no deliveries are recorded for these days. It is therefore uncertain whether they belong to III *pr.t* as well but were left blank because they were added at another point in time, or whether they are entries for another month. The other ostracon, O. Ashmolean HO 1088, is also dated to year 3, III *pr.t* by a month designation. It records a few of the same days, but as illustrated in the overview below, no information is duplicated. For example, days 2 – 5 are recorded in both ostraca, but the deliveries for these days are only mentioned on O. Ashmolean HO 1088 and not on O. UC 31967. The two ostraca thus seem to complement each other. That is true for

[235] It is possible that O. Florence 2631, tentatively attributed to year 18 of Ramesses III, is inscribed with some sort of duty roster, see Appendix I, § 4. If this interpretation is correct, it would be the earliest 20th Dynasty duty roster composed with marks.

[236] The Egyptian week consisted of 10 days. In general no work on the royal tomb undertaken during the 'weekend', the last two days of the week, see e.g. Jac. J. Janssen, *Village Varia. Ten Studies on the History and Administration of Deir el-Medîna.* EU 11 (Leiden 1997), 88 and n. 11.

some of the day numbers as well. O. Ashmolean HO 1088 lists days 1 to 9, and then continues with day 13. We find the missing days 10 – 12 on O. UC 31967.

O. UC 31967		**O. Ashmolean HO 1088**	
-	-	Day 1	[…] 48 […]
Day 2	-	Day 2	fish 300 Bakenkhonsu (?); wood 750 Ptahmose and Bakenkhonsu
Day 3	-	Day 3	*psn* bread 16
Day [4]	-	Day 4	dates 2; *bi.t* bread 8; 200 Pades and Bakenkhonsu
Day 5	-	Day 5	fish 170 (?); 200 Bakenkhonsu
-	-	Day 6	-
-	-	Day 7	wood 100 Bakenkhonsu
-	-	Day 8	*ds* jars 2; Ptahmose […]
-	-	Day 9	-
Day 10	-	-	-
Day 11	wood 300 Pades (?)	-	-
Day 12	[wood] 300; Ptahmose	-	-
-	-	[Day 13]	-
-	-	Day 14	*psn* bread […] 2; *bi.t* bread 16; vegetables 5
-	-	Day 15	*ds* jars 2; dates [1] left side
-	-	Day 16	-
-	-	Day 17	-
-	-	Day 18	-
-	-	Day 19	8,000
-	-	Day 20	vegetables 6; dates (?) [1]; wood 300
-	-	Day 21	*ds* jars 4; vegetables […]
-	-	Day 22	-
Day 23	fish 360; *psn* bread 12; *bi.t* bread 12	Day 23	-
-	-	-	
Day 25	Pades (?) wood 100 [+ x?]	-	-
Day 26	-	-	-
Day 27	Bakenkhonsu wood 346	-	-
Day 28	-	-	-
-	-	Day 29	*psn* bread 20; 166
-	-	Day 30	-

TABLE 40. ENTRIES FOR O. UC 31967 AND O. ASHMOLEAN HO 1088

The fact that no information is duplicated on different ostraca composed with marks suggests that a single duty roster was composed for the records of a certain period – often one month – although apparently not necessarily on a single ostracon.

However, the length of the period recorded per ostracon may vary. It is often no longer possible to assess how long the recorded period was, as several ostraca are not preserved in their entirety. Regardless, examining every single recorded entry on securely dated ostraca, we observe that in the period of Ramesses III, year 20 – Ramesses V, year 1, 60 different months are attested – although most of them not in their entirety (TABLE 41). By counting the number of hieratic journal texts known from the reign of Ramesses III years 24 through 31 and dividing that total by the number of months in that period Janssen calculated the percentage of ostraca that had survived during this timeframe: c. 40%.[237] Supposing that duty

[237] These hieratic journal texts appear to be – with one exception – concerned with the right side of the crew only. See Janssen, 'Literacy and letters', 85. This percentage is in reality somewhat higher as new journal texts have come to light since Janssen's study.

rosters composed with marks were regularly produced from year 25 of Ramesses III to year 5 of Ramesses IV, we arrive at a similar percentage: c. 35%.

Year	*šmw* I	*šmw* II	*šmw* III	*šmw* IV	*ꜣḫ.t* I	*ꜣḫ.t* II	*ꜣḫ.t* III	*ꜣḫ.t* IV	*pr.t* I	*pr.t* II	*pr.t* III	*pr.t* IV	Total
Pre 24	●												1
20	●												1
24													0
25						●				●		●	3
26	●	●	●	●				●				●	5
27			● ?					● ?					2?
28		●		●	●							●	4
29							● ?	●	●				3?
30		●	●	●●	●		●	●	●		●	●	9
31						●		●	●	●	●	●	6
32	●	●	●										3
1						●							1
2										●	●	●●	
2 add.	●●●●●												8
3											●●	●	
3 add.	●												4
4	●●●●●●												6
5	●												1
6	●												1
7				● ?									1?
1	●												1

TABLE 41. MONTHS RECORDED BY DUTY AND DELIVERY TEXTS COMPOSED WITH MARKS

3.3.3 Material and provenance

A total of 29 ostraca recording duty rosters with marks are securely dated to the reign of Ramesses III. For eight of these ostraca a provenance is unknown as they come from museum collections and do not join excavated ostraca (Ashmolean: four ostraca; Fitzwilliam: one ostracon; Glasgow: one ostracon; Strasbourg: two ostraca). The pieces from the Strasbourg collection may have been found at the village, as several other Strasbourg ostraca join ostraca discovered by Bruyère's excavations at the Kom Sud. The other 21 ostraca must have come from the village. That is suggested in seven cases by the fact that they were discovered by the French excavations at Deir el-Medina, while for the remaining 14 ostraca an exact findspot is recorded. Two were discovered in the Grand Puits and 11 came from the Kom Sud. The recorded provenances of the shards that constitute ONL 305 + ONL 333 + ONL 6208 (South Wadi and probably a trench south of the village) indicate that this ostracon must have come from the Kom Sud as well. The majority of these ostraca, 20 pieces, are written on large pieces of pottery. They originate predominantly from the village (18 ostraca; two of unknown provenance. In addition, nine ostraca are inscribed on chips of limestone. Three of these were discovered at the village, while six are of unknown provenance.

From the reign of Ramesses IV we know of 21 duty rosters composed with workmen's marks. One was found in the Valley of the Kings and eight were discovered in the village. Four of these came from the Kom Sud, but an exact findspot is not available for the other four ostraca. The findspot of the remaining 12 ostraca is not known either. The ostraca are now kept in different museums (Ashmolean: seven ostraca; Leiden: one ostracon; Louvre: one ostracon; Oriental Institute Museum: one ostracon; University College Museum: two ostraca). Regarding the material of the ostraca only two were written on pieces of pottery, whereas the other 19 were written on limestone. Six of the limestone ostraca and two of the ceramic ostraca were discovered at Deir el-Medina, and one ceramic ostracon was found in the Valley of the Kings.

We can date 14 duty rosters written with marks to the reign of Ramesses V or a later king. Only three ostraca were found at Deir el-Medina, all from another findspot than the Kom Sud: two were discovered in the Grand Puits, and one in the *kom* south of the temple. For two ostraca a provenance in the Valley of the Kings is secured. One of these, O. Cairo JE 96328, was found in the area of the workmen's huts near KV 18. The provenance of the remaining nine ostraca, all kept in museum collections (one in the British Museum, one in Glasgow, seven in the Ashmolean Museum), is unknown. Only a single ostracon (from the workmen's huts in the Valley of the Kings) is inscribed on pottery, while the other ostraca are all written on limestone pieces.

The image that emerges is that of a development in which pottery, the favourite medium for composing duty rosters with marks in the reign of Ramesses III, is replaced by limestone during the reigns of Ramesses IV and Ramesses V (CHART 1). Simultaneously, Deir el-Medina ceases to be the most common findspot for duty rosters with marks from the time of Ramesses IV onwards, and the number of ostraca of an unknown provenance increases. Likewise, the only three secured instances of the Valley of the Kings as the findspot for ostraca date to a time after the reign of Ramesses III (CHART 2). Although we cannot be certain whether both trends are related, it would not be surprising that when the location of discarding and therefore probably also the location of production of duty rosters shifted from the village to the Valley of the Kings, limestone became the preferred medium for such documents. Indeed, two out of a total of three ostraca for which a provenance in the Valley of the Kings is recorded are written on limestone chips.

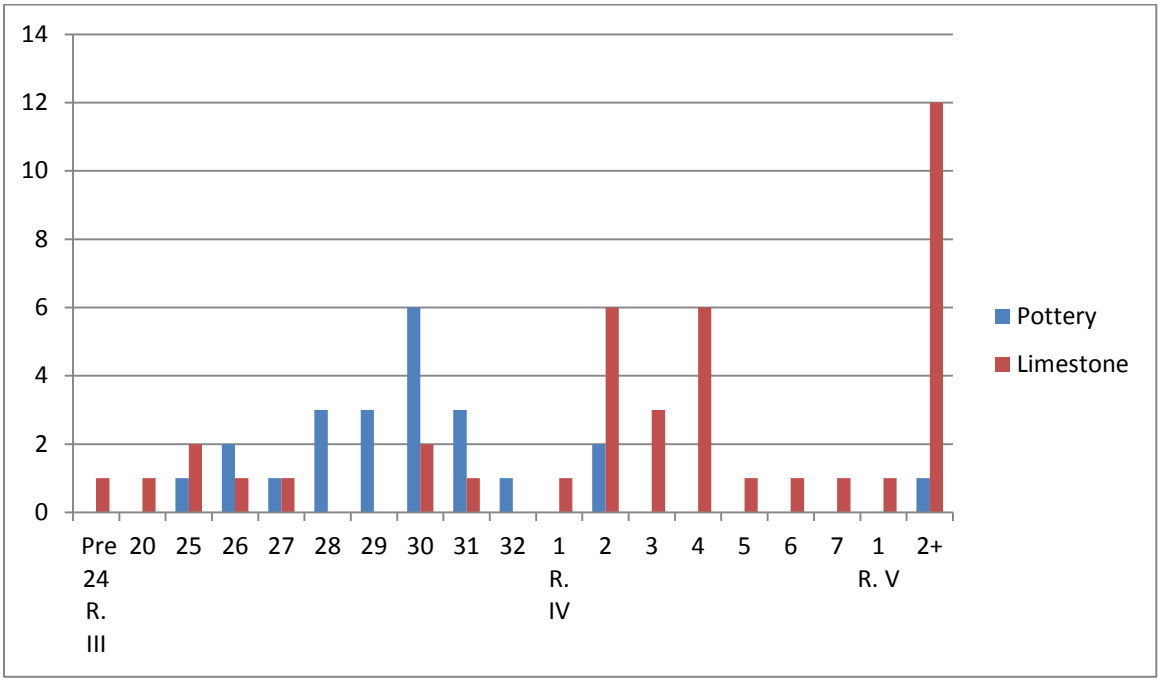

CHART 1. CHRONOLOGICAL DISTRIBUTION OF MATERIAL

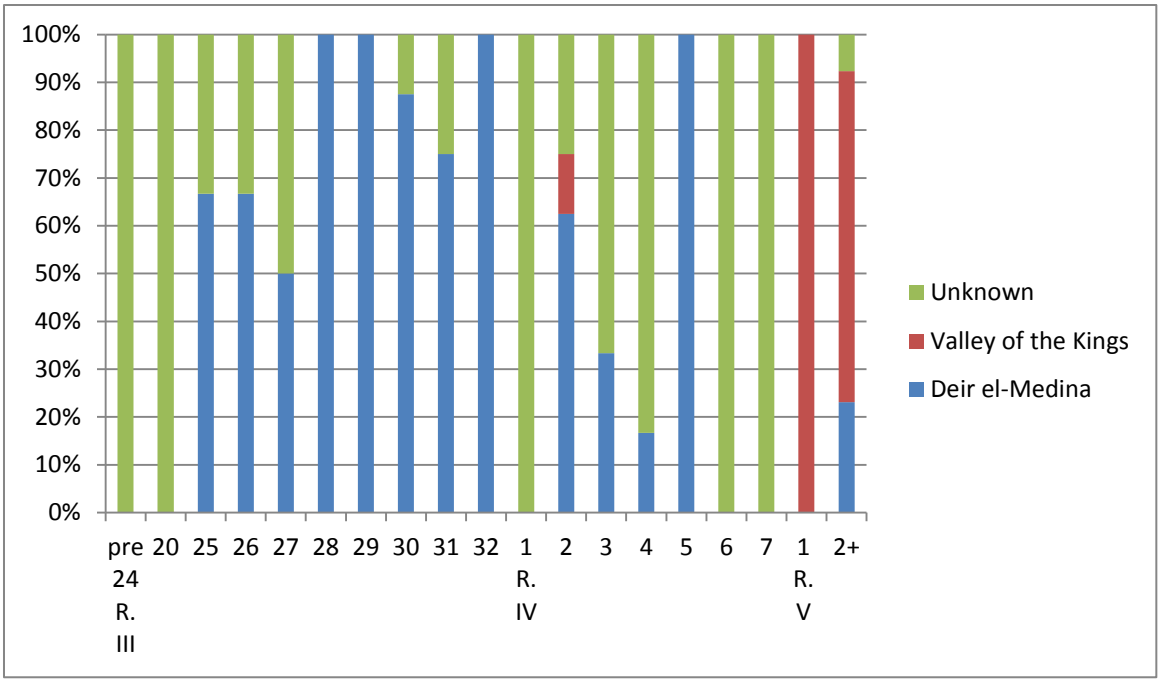

CHART 2. CHRONOLOGICAL DISTRIBUTION OF PROVENANCE

3.3.4 Periods covered by ostraca with marks

Despite the incomplete state of the majority of ostraca we can often estimate the length of the period that is recorded by a document thanks to the enumeration of the days of the month. Taking the obverse and reverse of ONL 331+ as representing two separate documents, there are 80 duty rosters composed with marks. In 29 cases we can hardly reconstruct the length of the original document, but there are good indications for the remaining 51 documents. A relatively small number of ostraca cover a period of less than 30 days. In just three cases, an ostracon records deliveries for only a single day. There are three ostraca that record only a few days, two ostraca that record the end of one month and the beginning of the next, and one ostracon that covers the second half of a month and the beginning of the next month.

The majority of the ostraca, however, seems to have covered the duty roster and deliveries of a single month. This is certainly the case in a single well preserved ostracon, whereas another completely preserved ostracon records days 1 to 28 and leaves out the final weekend of the month. Then we know of 28 more ostraca which are not preserved in their entirety, but in all likelihood recorded deliveries for a single month as well. In addition, there are five ostraca which document the duty roster of one entire month as well as the first few days of the next month. All of this can be inferred from surviving entries recording day 1 and day 30, but also from damaged sections of an ostracon where one would expect day 1 or day 30 based on the preceding or succeeding entries on the document.

In five instances (almost) two entire months are recorded. That can be deduced despite the lacunae in the inscriptions from the surviving entries. In two of these cases[238] the obverse is used for one month, and the reverse for the succeeding month. There are even examples of ostraca (three instances) that contain entries for three different months. Ostraca that record deliveries of two or three months would probably have to be kept by the scribe for a longer period of time, and might in part explain the occasional need for month designations and regnal year numbers.

[238] ONL 297+ and ONL 6236+.

3.3.5 'Scribal' mistakes

In the delivery texts composed with marks we occasionally observe mistakes made by the author. There are several instances in which he appears to have initially forgotten to add the workman's mark after the day number, and therefore later added it at a different spot. In some cases, the workman's mark follows after the commodities.[239] In other instances, the workman's mark precedes the day number.[240] On ONL 331+ obverse as well as on ONL 306+ reverse the workman's mark is inscribed between the sign for day and the day number. Other mistakes concern the writing of hieratic numerals. Such errors occur in the earliest duty rosters prior to year 24 of Ramesses III, and well into the reign of Ramesses V or an even later king. In three instances the scribe omitted the sign for a decade in compound numerals or wrote down the wrong one.[241]

These mistakes are not common in contemporary hieratic duty rosters,[242] but they are not necessarily a testimony to the incompetence of the scribe who authored the duty rosters with marks. Instead, such minor errors may have been made when the scribe was in a hurry or absentmindedly wrote down a series of entries. There are, however, mistakes that do inform us about the extent to which he was acquainted with hieratic script and hieratic scribal practice. For instance, in eight different ostraca the scribe noted down a compound numeral using hieratic signs but wrote the units to the right of the tens, while hieratic is written from right to left exclusively.[243] In two instances, entries are (partially) written from left to right, which would not be possible in hieratic script.[244] Even more remarkable are two cases in which an entire number is mistakenly mirrored.[245] Similarly, the signs for 'day' and for *bỉ.t* bread are mirrored in three instances.[246] Finally, in O. Glasgow D. 1925.80 we obverse that the numeral 90 for the quantity of wood on day 11 is a mixture of the hieratic numeral '80' and '90'. This list of mistakes is rather short considering a time span of at least 21 years, but they were made by someone using a system that employed a very limited set of signs.

3.3.6 Corrections

On several occasions the scribe noticed that he had made a mistake in his work, and corrected it. Most of his corrected errors concern the identity marks for the workmen that are recorded in the duty roster. The scribe erased the incorrect mark and added the right one in its place.[247] On O. Ashmolean HO 1093 the correct workmen's marks were written over the incorrect ones,[248] while on ONL 314 incorrect workmen's marks were simply covered by a blob of

[239] ONL 317+: day 12; ONL 298+ obverse: day 13; ONL 298+ reverse: day 18; O. Ashmolean HO 1249 obverse: day 8; O. UC 31967 reverse: day 23; O. Ashmolean HO 1080 obverse: day 1; ONL 314 reverse: day 14.
[240] ONL 336+: day 20; ONL 331+ obverse: day 24.
[241] O. Ashmolean HO 1084 obverse: the numerals 21 and 22 for day numbers 11 and 12; O. Ashmolean HO 1083 obverse: numerals 14, 15 and 16 for day numbers 24, 25 and 26; O. Ashmolean HO 1095 obverse: numerals 5, 6 and 7 for day numbers 15, 16 and 17.
[242] The author knows of only a single example: O. DeM 45 reverse, l. 3: "day 15" for "day 25"; compare Jac. J. Janssen, 'Accountancy at Deir el-Medîna: How accurate are the administrative ostraca?' *SAK* 33 (2005), 150.
[243] O. Ashmolean HO 1247 reverse: a column containing five instances of the numeral 16; ONL 312 obverse: numeral 25 in "day 25"; ONL 300+ reverse: the numeral 12 for the quantity of *bỉ.t* bread for day 23; ONL 329 obverse: the numeral 22 in "day 22"; O. Ashmolean HO 1093 reverse: numeral 18 in "day 18"; ONL 314 reverse: numerals 14, 15 and 16 for "day 14", "day 15" and "day 16"; O. OIM 19125 obverse: numeral 11 for "day 11"; O. Ashmolean HO 1078 obverse: numeral 69 for a quantity of fish.
[244] O. Ashmolean HO 1084 reverse: entries for days 15 to 20; O. UC 31967 obverse: entry recording the delivery of wood for day 27.
[245] O. Fitzwilliam EGA 6120.1943 reverse: numeral 20 in "day 24"; ONL 297+ reverse: numeral 20 in "428".
[246] ONL 6237+ obverse: sign for 'day' in "day 28"; ONL 6236+ obverse: sign for 'day' in "day 14"; O. Ashmolean HO 1095 obverse: sign for *bỉ.t* bread.
[247] ONL 340, days 25-27; O. Ashmolean HO 1249, day 7; ONL 298+, day 20.
[248] Days 27 and 28.

ink.[249] In two instances, the scribe corrected mistakes he made when writing down the day numbers.[250]

3.3.7 Palimpsests

In seven ostraca, traces of a palimpsest[251] are visible.[252] The older inscriptions do not appear to have been hieratic texts, but were also duty rosters with marks – in some cases demonstrably so. In addition, there is the case of ONL 331+. The reverse of this ostracon inscribed with marks records days 19 – 28 of IV *pr.t*, year 28, while the obverse records I *pr.t*, year 30. The obverse and reverse are therefore almost two years apart from each other. This document thus proves that at least on this occasion, a duty and delivery text composed with marks was still accessible 20 months after it was composed, after which the ostracon was used for the same purpose: to inscribe a duty roster using marks. The ostraca with traces of palimpsest point in the same direction. This suggests that the duty rosters with marks were kept for quite some time after they were written, but also demonstrates that the records eventually lost their value and could be erased for writing new documents.

3.3.8 Check marks

Check marks have been added to 12 duty and delivery texts composed with marks. One very fragmentary ostracon with check marks cannot be dated with any precision.[253] Two ostraca date to the reign of Ramesses III,[254] while five date to the reign of Ramesses IV[255] and four to the reign of Ramesses V.[256] The check marks are small dots that are added to various elements in the duty rosters, usually a workman's mark (19 instances), but also day numbers (four instances), deficits (three instances), numerals written in the margin of the document that probably relate to totals of certain commodities (three instances), but also to commodities (beer: four instances; fish: three instances; wood: three instances; bread: three instances; dates: one instances; unknown: three instances). There are some cases in which the entries and the check marks are in the same colour,[257] but the majority of the check marks are in a different colour than the colour of the entries to which they are added.[258] Interestingly, several of the red check marks on ONL 341 were also incised with a sharp object at a later point.

The fact that the majority of check marks were done in a different colour could indicate that they were added at a later point as well. We can at least surmise that it was the scribe's intention to distinguish the check marks from the day entries in order to draw attention to them, which suggests the duty rosters were reviewed some time after they were completed.

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[249] Days 28 and 29.

[250] ONL 299, day 28; ONL 298+, days 24 and 25. See also the correction of the numeral '30' into 𓎆 for the last day of the month on the obverse of O. Fitzwilliam EGA 6120.1943.

[251] Palimpsest ostraca are not uncommon practice in the Theban necropolis. The current version of the Deir el-Medina Database lists 201 examples of ostraca that are known to be palimpsests.

[252] Four ostraca date to the very end of the reign of Ramesses III (ONL 336+; ONL 298+; O. Ashmolean HO 1092; ONL 6236+), one to the reign of Ramesses IV (ONL 313), and three from the reign of Ramesses V (O. Ashmolean HO 1081; O. Ashmolean HO 1095; O. Glasgow D. 1925.80).

[253] ONL 6523.

[254] ONL 317+; O. Ashmolean HO 1092; for both ostraca a hieratic parallel exists.

[255] Year 2: O. Ashmolean HO 1249; ONL 310; year 4: ONL 341; O. Ashmolean HO 1080; year 5: ONL 314.

[256] O. OIM 19125; O. Ashmolean HO 891; O. Ashmolean HO 1091; O. Ashmolean HO 1095.

[257] Black ink: O. Ashmolean HO 1249; O. OIM 19125; red ink: ONL 310; ONL 341.

[258] Red check marks for entries written in black: ONL 317+; O. Ashmolean HO 1092; ONL 341; O. Ashmolean HO 1080; O. Ashmolean HO 891; O. Ashmolean HO 1091; O. Ashmolean HO 1095; ONL 6523.

3.3.9 Colour use

It is difficult to analyse the use of red and black ink on the ostraca in our corpus, as many ostraca are not preserved in their entirety. In their current state, there are 31 ostraca that are entirely inscribed in black ink.[259] Three additional ostraca are also completely written in black ink but contain red check marks,[260] and there are 10 ostraca that were written predominantly with black ink, but contain several numerals or deliveries in red ink.[261] Just a single duty roster is written entirely in red ink.[262] Although black ink thus seems to be the preferred colour for ostraca with marks, there are 32 other ostraca in which some day entries have been written in black ink, and others in red.[263]

It is not immediately evident what the meaning of these entries in red ink is. Regarding hieratic documentary texts it has often been stated that red is used to highlight important sections and headings of a text.[264] Four instances of red entries in duty rosters with marks could perhaps be interpreted in the same way. First of all, there is an enigmatic entry in red on ONL 6236+ which can only be partly deciphered:

Day 16 Nakhtmin
Wesekhnemtet – jar (?) – cobra (?)

It is unclear what the meaning is of the jar-shaped sign and of the cobra-shaped sign. One is reminded of the month designation of IV *pr.t* and the jar-shaped signs that are sometimes inscribed next to them, but the entry in question here dates to I *pr.t*, and concerns a day in the middle of the month. The entry is in itself highly unusual, which might explain why it is in red ink. The second instance concerns an entry recording a wood delivery recorded in red ink, which is situated above the year number on ONL 310. The significance of this entry escapes us as no day number was added in front of it. Since the entry precedes the first entry of the month, one could propose that the entry belonged to the previous month and was inscribed as a reminder in red ink to highlight it. However, the workman's mark that accompanies the entry suggests that it is connected with the first day of the month, for which the same workman's mark is recorded. Next, there is the month designation on ONL 337, done in red ink. The year number above it however is inscribed in black. Moreover, most other dates are inscribed in black ink. The final case is in ONL 332, where two instances of the sign for 'deficit' are inscribed in red ink, and we might infer that such details were important entries that deserved to be highlighted. Yet, another instance of this sign on the same ostracon is inscribed in black ink. It thus seems that, except perhaps for the first example, the other three instances are not convincing cases of important sections or headings that needed to be

[259] O. Ashmolean HO 1247; ONL 312; O. Strasbourg H 45; ONL 6284; ONL 322+; ONL 338+; ONL 305+; ONL 6222; O. Leiden F. 2000 / 1.5; ONL 316; O. Ashmolean HO 1249; ONL 309; O. Varille 425; ONL 329; O. Cairo SR 12165; O. Ashmolean HO 1094; O. Turin N. 57302; O. OIM 19125; O. Ashmolean HO 1078; O. Ashmolean HO 1081; O. Ashmolean HO 1083; O. Cairo CG 25651; O. Cairo JE 96328; ONL 323; ONL 303; ONL 6267; ONL 613; ONL 1639; ONL 6729; ONL 876; O. Strasbourg H 13.
[260] O. Ashmolean HO 891; ONL 6523; O. Ashmolean HO 1080.
[261] ONL 332; O. Ashmolean HO 1086; O. Turin N. 57393; ONL 313; O. Ashmolean HO 1093; O. Ashmolean HO 1090; O. Ashmolean HO 1250; ONL 6237+ ; O. Ashmolean HO 1091; O. Ashmolean HO 941.
[262] ONL 6219.
[263] O. Fitzwilliam EGA 6120.1943; O. Glasgow D. 1925.67; ONL 317+; ONL 331+ reverse; ONL 337; ONL 297+; O. Ashmolean HO 1084; ONL 299; ONL 336+; ONL 298+; ONL 331+ obverse; ONL 340; O. Ashmolean HO 1092; ONL 296+; ONL 6236+; ONL 300+; ONL 318+; O. Ashmolean HO 1082; ONL 310; O. UC 31967; O. Ashmolean HO 1088; ONL 341; ONL 314; O. UC 31959; O. Ashmolean HO 1095; O. BM 50731; O. Glasgow D. 1925.80; ONL 6320; ONL 304; ONL 306+; ONL 308; ONL 320; ONL 6730.
[264] E.g. Georges Posener, 'Sur l'Emploi de l'Encre Rouge dans les Manuscripts Égyptiens' *JEA* 37 (1951), 77-80; Manfred Weber in: *LÄ* V, 313-314, 'Rubrum'; Donker van Heel, 'Individual handwritings', 77, n. 142.

highlighted. What is more, the majority of the red parts in duty rosters composed with marks concern common day entries. They do not seem to differ in importance from other day entries.

When we take a closer look at red elements that are part of a day entry written in black ink, we notice that they are often situated at the end of a line. An example is found on the obverse of ONL 318+. Three day entries on the obverse are written entirely in red ink, while all remaining day entries are inscribed in black ink. The exception is the entry for day 3, which ends with a delivery in red ink:

Penpakhenty, Year 32, II *šmw*

[Day] 1	Meryre	fish; 4; 80
-		
Day 3	Hori	*ds* jars 4; dates [1] right side
Day 4	Weserhat	vegetables 4; dates [1] left side
Day 5	Minkhau	dates 3 right side
Day 6	Iry-ʿa	
Day 7	Harshire	*psn* bread 16; *bỉ.t* bread 12; vegetables […]
Day 8	Iyerniutef	[…]

In total there are 15, perhaps 17 instances of day entries written in black ink, with red signs at the end.[265] In contrast, there are no instances of red elements that are found in the middle of a black day entry. In all probability, the red elements were added at a later point, after the initial entry in black ink had been inscribed. This would suggest that the scribe favoured red ink for later additions.[266]

And there are more indications that red ink was used at a later point, perhaps after the ostracon had been revised. Firstly, as we have seen, the majority of the check marks – probably evidence of revision – were done in red ink. Additionally, there are entries which were originally written in black ink and were subsequently traced in red ink. This is well illustrated by ONL 317+. This ostracon records deliveries for year 26, IV *ꜣḫ.t*, days 1 – 23. For now, we limit ourselves to days 4 – 9 and 21 – 22:

[…]			
Day 4	• Khaemwaset	fish • 360 right side; 360 left side	
Day 5	Nakhtmin		
Day 6	Reshupeteref	*ds* jars [1] right side; dates [1] left side; fish 600 left side	
Day 7	• Amenemope	*ds* jars [1]; vegetables 8; dates [1] right side; fish 950 Amenkha son of Khonsumose	
Day 8	• Mose	fish 450; • 400 left side	
Day 9	Menna	*psn* bread 12; *bỉ.t* bread 12 •	
[…]			
Day 21	*ds* jars [1] left side; dates [1] right side	Neferhotep	[sic]
Day 22	fish 230 •		

The underlined sections represent elements in red ink, and the double underlined parts are elements that were first written in black ink, but were then redone in red at a later moment. That point may well have been when the scribe was revising the document with red ink on his

[265] ONL 6237+ reverse, day 17; ONL 317+, day 6, 19 and 20; ONL 337 days 3 and 5; ONL 6236+, day 2; ONL 318 obverse, day 3; ONL 310, day 3; ONL 313, day 23; O. Ashmolean HO 1088, day 29; O. Ashmolean HO 1082, day 9; O. Ashmolean HO 1093, day 28; O. Ashmolean HO 1250, day 27; ONL 308, l. 2; perhaps also O. Ashmolean HO 1086 reverse, final entry, and O. Ashmolean HO 1090, day 20 (?).

[266] Note that red ink was also used for additions in the administrative text of P. Wilbour, see Ben J.J. Haring, *Divine Households. Administrative and economic aspects of the New Kingdom Royal memorial temples in Western Thebes.* EU 12 (Leiden 1997), 317 and n. 1; 319.

pen, adding check marks for day entries 4, 7, 8, 9 and 22, and when a delivery of fish was added to day 6. In total there are three instances of such entries that were redone in red ink.[267]

Without any doubt, red ink was used at a later point to add the numeral '40' to the numeral '400' that was written in black ink, as was the rest of a day entry on the reverse of O. Ashmolean HO 1082:

Day 28	Iry-'a	wood 336; 440

Finally, there is an instance concerning entries in black ink that were corrected in red ink. These corrections are found on the reverse of O. Ashmolean HO 1093:

Day 27	Minkhau [inscribed over the black mark of Weserhat]	
Day 28	Iry-'a [inscribed over the black mark of Minkhau];	*psn* bread 18; dates 1 left side

The marks of Minkhau (day 27) and of Iry-'a (day 28) were inscribed over older marks that belonged to the original inscription in black ink. Once again we get the impression that red ink was used after the original inscription was finished, to make corrections and to add a delivery of dates to day 28.

All these examples indicate that red ink was used to make additions to entries written in black ink, but the opposite also seems to have happened. That is well illustrated by the reverse of ONL 340, which records the duty roster and deliveries for days 3 – 18 of III *pr.t*, year 30 and is inscribed almost entirely in red ink. The entries for days 8 – 12 read:

[Day] 8	Anynakht	
[Day 9]	Neferher	wood 150 Bakenkhonsu
Day 10	Amenemope	wood 750 Ptahmose; 145 Bakenkhonsu; 240 deficit wood
Day 11	Nesamun	*ds* jars 3; wood 150 Bakenkhonsu
Day 12	Nakhemmut	*ds* jars 2
Day 13	Khaemnun	dates [1]; *ds* jars 2

Here we see the exact opposite of what we noticed earlier: a black delivery has been added at the end of a day entry written in red ink, a day entry that is part of an entire section written in red. There are more instances of such black components, and all of them occur at the end of a day entry written in red ink.[268] Similarly, there are instances where black ink was used to re-inscribe entries that were originally written in red.[269] We can therefore infer that the choice for either red or black ink is in most cases connected with revisions, corrections, and additions. Hence, sections in which the scribe of the ostracon switched to a different colour are evidence of subsequent stages in the composition of the ostracon.

We could well be dealing with the same phenomenon when we examine some of the ostraca with marks that contain both subsequent entries written entirely in black ink, and subsequent entries entirely done in red. This is best illustrated by the obverse of ONL 336+, a duty roster composed with marks recording the deliveries for year 30, III *ꜣḫ.t*. We begin reading at the entry for day 13:

Day 1[3][…]		
[…]		
[Day] 16	Amenemope	
Day 17	Nesamun	*ds* jars 1; dates [1] left side

[267] ONL 6237+ reverse, day 17; ONL 317+, day 8 and 22; ONL 337, month designation.
[268] ONL 336+, days 10 and 11; ONL 340, day 27; ONL 296+, day 24; O. Ashmolean HO 1088, day 5; ONL 341, day 9.
[269] ONL 297+ obverse, days 10-15; reverse, days 8-11; O. Ashmolean HO 1088, day 5; ONL 341, day 9.

Day 18	Nakhemmut	
Day 19	Khaemnun	*psn* bread 8; *bỉ.t* bread 4
Neferhotep	Day 20 [sic]	Bakenkhonsu: wood 320; Ptahmose 350; dates 2 left side

Let us assume that, since the entry for day 13 is written in black ink, the lost entries for days 14 and 15 were black as well. The successive entries for days 16 to 18 were written in red ink, and it seems that the scribe continued in red ink for the entry of day 19: both the sign for 'day' and the numeral '19' are written in red ink. The remainder of the day entry however, consisting of a workman's mark and two deliveries of bread, was written in black ink. This switch to another colour can hardly be connected with the content of the entry, as there does not appear to be anything significant about the workman Khaemnun and the delivery of two types of bread. The most straightforward way to explain the change in the colour of ink is that the lines in black ink were added at a later point. The scribe seems to have finished the entry for day 18, inscribed 'day 19' in the same colour, and then put down his ostracon for a while. We may suppose that all this happened before the actual delivery of day 19 had taken place, and that the elements in black ink were noted down at a point after the goods had actually been delivered. The entry for day 20, and for that matter, the next entries as well, were written in black ink, and could therefore all have been written at the same moment.

A similar case is the duty roster for year 30, IV *šmw*, recorded with marks on O. Ashmolean HO 1084 obverse:

[…]	[…]	[…] 300; 200 Bakenkhonsu; […] 20 […]
Day 3	Khaemwaset	*ds* jars 2; dates 2
Day 4	Nakhtmin	*ds* jars 2
Day 5	Reshupeteref	dates 3; 160 Bakenkhonsu wood
Day 6	Amenemope	dates 3; *psn* bread 7; *bỉ.t* bread 8
Day 7	Mose	6 […]
[Day 8]	Menna	dates 2; *ds* jars 2
Day 9	Nakhemmut	*psn* bread 11; *bỉ.t* bread 6; wood 300
Day 10	Harshire	*ds* jars 2; vegetables 2; wood 250 Bakenkhonsu
Day 21 [sic]	Iyerniutef	*ds* jars 2; wood 200 Bakenkhonsu
Day 22 [sic]	Hori	[…]

The top of the ostracon is damaged but contains traces of deliveries written in red ink. The first complete entry concerns day 3. The day number and workmen's mark are written in red ink. Together with the top entry, this part of the ostracon could have been inscribed at the first stage of the ostracon. The deliveries for day 3 are written in black ink, as are the entries for days 4 – 6 and the day number and workmen's mark for day 7. This section of the ostracon appears to have been written during a second phase. In turn, the following phase was written in red ink, and includes the deliveries for day 7, the entry for day 8, and the day number and workmen's mark for day 9. Subsequently, the deliveries for day 9 are part of a later section in black ink. According to this reconstruction, O. Ashmolean HO 1084 would have been written in several phases over the course of a longer period. That is not to say that a single section, let us say the first entry of the ostracon up to the workman's mark of day 3, were all written in one go, because we cannot exclude the possibility that the different entries within a single section were written at different points in time as well. There are however two indications that a section written in one specific colour was indeed written at a single moment in time. It concerns two ostraca in which mistakes were corrected by the scribe. In ONL 340 and ONL 314, the scribe incorrectly noted down several identity marks for workmen on *wrš* duty for subsequent days. These faulty marks were all inscribed in the same colour of ink. It is most plausible that the scribe noted down these incorrect identity marks at one go. Otherwise he would have noticed his initial mistake, instead of making one or two more at a later moment.

In summary, it seems plausible that separate sections of duty rosters composed with marks were written at different moments, and that the author of these documents often chose a different colour of ink to reflect this. There are two more documents with sections of successive day entries in one colour that end with a delivery in another colour, after which a section follows in the same colour in which the previous one ended.[270]

We may explain ostraca that consist of subsequent sections of entries inscribed in different colours in the same way: different colours were not applied to highlight important sections, but indicate – intentionally or unintentionally – successive moments during which they were entered. In five ostraca, the shift to another colour seems to have taken place in, or just before or after the weekend, and the individual sections have the length of about one week or of two weeks. These seem logical units for individual sections, but they are not the rule, and sections of shorter or longer durations occur more frequently:

ONL 299	1-20; 21-30
ONL 336+	1-9; 9-19; 19-30
ONL 298+	1-10; 10-30
ONL 331+	1-11; 12-22; 23-30
ONL 341	2-8; 9-10; 11-29

ONL 340	3-14; 14-16; 17-28; 29-30, 1-4
ONL 296+	1-22; 23-27
ONL 300+	1-15; 16-30; 21-30, 1-25 (additionally: 24-26)
ONL 318+	18; 19-30, 1-8; 10-11; 22-30, 2-27
O. Ashmolean HO 1088	1; 2-4; 5-6; 7-20; 21; 22; 22-24; 29-30, 1
O. Ashmolean HO 1082	4-10; 11; 11-15; 16-18; 19-30, 1-3
ONL 314	8-27; 28-29
O. UC 31959	5-8; 8-15
O. Ashmolean HO 1095	3; 4-8; 9-16; 17-20; 21-22; 23-30
ONL 306+	25-27; 28-30

TABLE 42. ENTRIES IN RED AND IN BLACK, NOT TAKING INTO ACCOUNT SOME OF THE LOST DAYS WITHIN A SECTION

3.3.10 Lay-out

In the majority of duty rosters composed with marks a day entry consists of a single line of marks and numerals. These lines are written one below the other, to form a column of entries.[271] There are however instances of entries which are not part of a larger column, and which were written in a different direction. In most cases, such as in ONL 300+, a few additional entries were added at an angle of 90 or 270 degrees next to the main column(s) of entries, because there was not enough space at the bottom of the ostracon to continue a column (15 instances).[272] In seven other cases it is unclear if lack of space was the reason that some entries were written perpendicular to the main inscription,[273] but there are four ostraca in which there certainly was enough blank space left.[274]

The obverse of one of these ostraca, ONL 318+, is altogether a rather disorganised document. The ostracon is of considerable size and the obverse originally probably recorded the duty roster for two entire months. Some of its day entries are not inscribed in logical positions (day 30 follows after day 20), and there are entries that are so haphazardly inscribed that it is very difficult to determine to which days they belong. There are three other

[270] ONL 337; ONL 340.
[271] Cf. Haring, 'Workmen's Marks on Ostraca', 146-147.
[272] ONL 337; O. Ashmolean HO 1084; ONL 299; ONL 298+; ONL 340; O. Ashmolean HO 1092; ONL 300+; O. Ashmolean HO 1082; O. Ashmolean HO 1088; ONL 341; O. Ashmolean HO 1080; O. Ashmolean HO 1093; O. Ashmolean HO 1250; ONL 314; O. UC 31959.
[273] ONL 297+; ONL 310; O. Cairo SR 12165; O. Cairo JE 96328; ONL 306+; ONL 308; ONL 6730.
[274] O. UC 31967; ONL 331; ONL 318+; O. Turin N. 57393. Compare also the disorganised order of entries on O. Fitzwilliam EGA 6120.1943.

ostraca,[275] which, together with the ostraca with entries written at different angles, have a rather disorganised lay-out.

These observations about the lay-out are noteworthy. First of all, they underline once more the informal character of ostraca with marks. These records are at any rate atypical compared to contemporary hieratic delivery texts, which are generally written in lines and columns exclusively. Furthermore, we can conclude that the scribe of duty rosters with marks made an effort to include as many day entries on a single ostracon as possible. We are reminded of the Deir el-Medina scribe who was the author of many of hieratic delivery texts which date to the same period as the ostraca with marks under discussion here. The ostraca with marks are similar to his documents, because this scribe also seems to have been in the habit of inscribing ostraca with as many entries as he could, preferably for at least a single month.[276] In some instances[277] he too must have run out of space and could not accommodate all day entries onto a single document, yet he refrained from turning his ostracon 90 degrees to squeeze in another entry or two. On the contrary, in the majority of his documents he did manage to fit rows of day entries of an entire month onto a single ostracon. This could mean that the hieratic scribe had a better eye for estimating how much space he would need for one document than the scribe of the ostraca of marks did. But another explanation is that the scribe of the delivery texts composed with marks had no clear indication of how long his document would become, because he inscribed his ostracon over the course of a longer period. As we discussed above, the use of red and black ink within a single ostracon seems to indicate that the scribe did not write many of his documents in one go. Therefore, we may imagine that the scribe of the duty rosters with marks noted down some day entries at several different moments in the month, perhaps sometimes even on a daily basis. The scribe, not knowing how much space he would need for the entries of an entire month, then occasionally produced less organised ostraca, in some instances documents with entries written at various angles even though blank space was available.

3.3.11 The identity of the scribe of the ostraca with marks

Without going into palaeographic details, we may venture a guess that at least the greater majority of the delivery texts written with marks were produced by a single scribe. To prove this point would require a proper palaeographic study, which lies outside the scope of the current work. Still, it can be reported that at a first glance there is, in terms of the shapes and ductus of the workmen's marks and the hieratic numerals, nothing that contradicts the suggestion that a single individual was responsible for the delivery texts with marks, save for four exceptions discussed below.

One may not be convinced by this generalising statement on the palaeography of the marks. There are however other indications that the ostraca in our current corpus were made by one man. The fact that during a period of c. 20 years we do not detect any distinct changes in the lay-out of the ostraca, in the ways in which they were produced, in the content they record, or in the usage of specific signs or marks, points in the same direction. Conversely, we do not encounter the signs for commodities or for a specific side of the crew – apart perhaps from the jar-shaped sign and the sign of the right side – on ostraca with marks other than those recording deliveries, neither on earlier nor on later ostraca, nor on other contemporary pieces. This would suggest that during the last third of the reign of Ramesses III to the beginning of the reign of Ramesses V it was the habit of someone in or around the community of necropolis workmen to record duty rosters and daily deliveries using workmen's marks and a self-invented system of additional signs for commodities and such.

[275] ONL 317+; O. Ashmolean HO 1084; O. Ashmolean HO 1094.
[276] Donker van Heel, 'Individual handwritings', 74-76.
[277] E.g. O. DeM 37, O. DeM 42 and O. DeM 43, see Donker van Heel, 'Individual handwritings', 75-76.

If this assumption is correct, we find another parallel in the domain of hieratic documents. On palaeographic grounds it is clear that most of the hieratic journal ostraca recording deliveries during the last years of the reign of Ramesses III and the first two years of the reign of Ramesses IV were the work of a single scribe as well. Donker van Heel has proposed that this man was the famous scribe called Hori.[278] We may likewise attempt to identify the scribe who created the duty and delivery ostraca composed with marks. This is a very risky endeavour because on none of these ostraca did the scribe leave his signature. There is nevertheless one man whom we may consider a plausible candidate: Pentaweret (iii). This man has been described by Davies[279] as a so-called '*smd.t* scribe', a man tasked with the administration and coordination of the delivery of supplies and commodities by the external service personnel.[280] Pentaweret (iii)'s activities in the reign of Siptah up to at least year 2 of Ramesses IV[281] correspond partially with the period during which delivery ostraca with marks were produced. In addition, the '*smd.t* scribe' Pentaweret (iii) was connected with the right side of the crew, and all ostraca recording deliveries and duty rosters with marks deal with workmen from precisely that side. Moreover, these ostraca record exactly those topics with which one would expect a '*smd.t* scribe' to have been concerned with: the organisation and administration of the daily deliveries made by *smd.t* agents, of the men on the receiving end who stood on watch, and of deficits of particular *smd.t* agents.

As reasonable as this identification may seem, it is merely a hypothetical one, because it would mean that Pentaweret (iii) was a 'scribe' with very limited knowledge of hieratic script. This observation stands in contrast with that of Donker van Heel, who pointed out that there are two hieratic ostraca that can be identified as hieratic texts written by Pentaweret (iii):[282] O. Michaelides 3, a donkey hire attributed to the middle of the 20th Dynasty[283], and O. Ashmolean HO 104, a record of an oath about a donkey dated to year 31 of Ramesses III.[284] If it is true that the '*smd.t* scribe' Pentaweret (iii) is the author of both texts, then he cannot have been the author of the delivery texts composed with marks. Hieratic ostraca O. Michaelides 3 and O. Ashmolean HO 104 display the hand of an experienced scribe, which the scribe of the ostraca with marks evidently was not. It is however not at all certain if the scribe Pentaweret mentioned as the author of O. Michaelides 3 and O. Ashmolean HO 104 was the same man as the '*smd.*t scribe' called Pentaweret. The number of contemporaneous scribes called Pentaweret during the first half of the 20th Dynasty makes for a complicated situation.[285] The scribe Pentaweret of the two hieratic documents cannot have been the scribe Pentaweret (v),

[278] Donker van Heel, 'Individual handwritings', 72-78; 81-82. There is no concrete evidence for this identification yet, but the on-going palaeographic study of Maren Goecke-Bauer may change this situation. She kindly informs us (personal communication, 2015) that preliminary results indicate that scribes Wennefer (v) and Amennakht (v) can be excluded as the authors of the hieratic journal ostraca, rendering the possibility that this scribe was indeed Hori more plausible.
[279] Davies, *Who's who*, 126-127.
[280] Although the individuals occupied with these matters are attested with the title 'scribe', very little is known about their exact roles within the village and about their scribal capabilities. Only in two instances is the title connected with the external service personnel (see below), and the label '*smd.*t scribe' is therefore an egyptological one. For this reason the title is written between quotation marks. There would seem to have been two simultaneous '*smd.t* scribes', one for the right side and one for the left. For an important overview of '*smd.t* scribes', see Davies, *Who's who*, 123-142.
[281] Davies, *Who's who*, 126-127.
[282] Donker van Heel, 'Individual handwritings', 81.
[283] Gutgesell, *Die Datierung* II, 439; Janssen, *Donkeys at Deir el-Medîna*. EU 19 (Leiden 2005), 15. The text ends with the phrase "made by scribe Pentaweret".
[284] Janssen, *Donkeys at Deir el-Medîna*, 24. The text ends with the phrase "made by him", which seems to refer to the last mentioned witness, the scribe Pentaweret.
[285] For a discussion see Davies, *Who's who*, 126-129.

as two sources record this man's demise in year 29 of Ramesses III.[286] We may however identify the author of O. Michaelides 3 and O. Ashmolean HO 104 as Pentaweret (iv) son of Amennakht (v). Although this Pentaweret (iv) was a draughtsman, there is an abundance of instances in which this man is mentioned with the title 'scribe'.[287] As the son of another well-known scribe, Amennakht (v), we should not be surprised that he was in actuality a trained scribe. He may therefore have been the individual who composed the brief texts about donkey hires during the first half of the 20th Dynasty.

It follows that there is *no concrete evidence* that '*smd.t* scribe' Pentaweret (iii) was a trained scribe, which supports our theory that he was the one who produced the duty and delivery texts composed with marks. Pentaweret (iii)'s last attestation as a '*smd.t* scribe' would seem to occur between year 2 of Ramesses IV and year 2 of Ramesses V.[288] The fact that he is not often attested after year 2 of Ramesses IV is of course due to the relatively small number of hieratic delivery texts from that period. Pentaweret (iii)'s disappearance after year 2 of Ramesses V would coincide with the arrest in the production of duty and delivery ostraca with marks around the same time.[289] Identifying the '*smd.t* scribe' Pentaweret (iii) as the author of these ostraca composed with marks would furthermore solve Davies' problem as to why at some moments during the end of the reign of Ramesses III the scribe Hori and the 'scribe' Pentaweret seem to have been contemporaneous '*smd.t* scribes' of the right side.[290] The answer to the question would be simple: they were indeed contemporaneous, and they were indeed tasked with the same administrative assignments, but one employed a system of marks to this end, while the other wrote hieratic texts.

Unfortunately, very little is known about the exact nature of the tasks of the '*smd.t* scribe'. Not much is known about Pentaweret (iii) either. We have no details of his parentage, and we are not sure where he lived. His contemporaneous colleague Paser (iii), '*smd.t* scribe' of the left side, might have had a house in the village according to an ambiguous ostracon O. Berlin P 1268.[291] If the '*smd.t* scribe' Pentaweret (iii) indeed is the man who created the journal ostraca composed with marks, he must have been a member of the community of Deir el-Medina because he was well acquainted with the identity marks that were used by the necropolis workmen.

That is also suggested by the fact that the scribe of the ostraca with marks seems to have collaborated closely with a hieratic scribe, presumably a scribe from the village. Virtually all duty and delivery ostraca with marks were written in a single hand, but there are four, perhaps five exceptions, one of which seems to corroborate the rule. On these four or five ostraca we can clearly detect a second, different hand, a hand that wrote a few entries or added to older ones with very neatly inscribed marks, signs and numerals, a hand which

[286] Theban Graffito 18 B, see Spiegelberg, *Graffiti*, 4 and for correct reading *KRI* V, 531; P. Turin Cat. 1880.
[287] Davies, *Who's who*, 109 and n. 348; 128; cf. Morris L. Bierbrier, *The Late New Kingdom in Egypt (c. 1300-664 B.C.). A Genealogical and Chronological Investigation* (Warminster 1975), 40-41.
[288] As suggested by O. DeM 149, see Janssen, *Village Varia*, 135-136; cf. Davies, *Who's who*, 129.
[289] As pointed out in section 3.2.7.8, ostraca O. Ashmolean HO 1081, O. Ashmolean HO 1091, O. Ashmolean HO 1083, O. Ashmolean HO 891, ONL 6320 and O. BM 50731 are dated after year 2 of Ramesses V but nothing suggests that they are much later than that year, with the exception of the latter ostracon. If the duty roster on the reverse of O. BM 50731 is contemporaneous with the list of workmen on the obverse it should date to the second half of the 20th Dynasty. In that case, it cannot have been created by the same scribe who composed all other duty and delivery ostraca with marks.
[290] Davies, *Who's who*, 128-129.
[291] Davies, *Who's who*, 127. Indeed, Paser may well have been at some point a full member of the crew of necropolis workmen because there are reasons to believe that he possessed his own identity mark, see below, chapter 4, 4.2.12.

cannot have been responsible for the production of the other ostraca with marks.[292] This different hand evidently displays a hieratic ductus, most clearly visible in the shape of hieratic numerals and the workmen's marks. On one of these four ostraca, ONL 300+, that observation is not merely a matter of palaeography, because the same hand added brief hieratic notes behind a few of the entries composed with marks, recording details about the distribution of goods and a special delivery of fruits and flowers. This observation is significant. In one of the few instances where we are almost certainly dealing with a different scribe, we see that the content of ostraca composed with marks changes. The document no longer simply records the duty rosters and the daily deliveries, but additional details as well. This variation in subject matter strengthens the idea that the other ostraca, all concerned with the duty roster and the deliveries exclusively, were made by a single individual.

It is worthwhile to dwell some more on ONL 300+. Entries for days 1 to 10 were clearly made by the hand that betrays a hieratic ductus, while all other entries on the obverse and reverse of this ostracon seem to be the product of the individual responsible for all other duty rosters composed with marks. This extraordinary ostracon thus indicates that at least on this occasion, the scribe of the ostraca with marks was assisted by a hieratic scribe. This could perhaps explain why the ostraca with marks are in many ways so similar to the hieratic duty rosters.

More evidence for collaboration between the scribe of the ostraca with marks and a professional hieratic scribe may be found on ONL 322+. The obverse of this piece is a duty and delivery text composed with marks, while the reverse contains a brief note written in hieratic about the *bȝk.w* quota of two water-carriers. It is of course possible that the two sides of the ostracon are not contemporaneous, but the note may also be taken as another indication of a hieratic scribe adding to the documentation of the assumed '*smd.t* scribe'.

A connection between a hieratic scribe and the scribe who authored the duty and delivery texts composed with marks is also suggested by four hieratic ostraca. One of them is O. Glasgow D. 1925.67, which is here counted as a duty and delivery text composed with marks (reverse, upside down, lines 1-5), but which is essentially a hieratic journal text recording the duty roster and deliveries for the first two weeks of II *pr.t*, year 25 (obverse, lines 1-7; reverse, lines 1-8). The other three ostraca, O. DeM 32, O. DeM 34+ and O. DeM 150+, are also hieratic documents that record deliveries. Interestingly, these four ostraca are not only similar in their content, they also seem to have been written by a single scribe.[293] Like the Glasgow ostracon, ostraca DeM 32, DeM 34+ and DeM 150+ display in the margins identity marks of workmen of the right side of the crew who were included in the duty roster. Hieratic numerals are inscribed in juxtaposition to these marks. The position of the workmen's marks in the margins of these documents suggests that they were written at a later point. They were most likely added by the same scribe who was responsible for the duty and delivery ostraca composed with marks, as one would expect the original scribe of these three ostraca to add complementary notes in hieratic.

3.3.12 Comparison of ostraca with marks and hieratic delivery texts: coverage

We are very well informed about the deliveries that were brought to the community of Deir el-Medina during the reigns of Ramesses III and Ramesses IV thanks to a great number of hieratic records. As mentioned, many of these texts were written by a single Deir el-Medina scribe, probably the scribe Hori.[294] The earliest known hieratic document from the 20th

[292] ONL 300+ (entries for days 1-10); O. UC 31967 (entry for day 23); O. Ashmolean HO 1082 (part of the entry for days 25; entry for day 3); O. Ashmolean HO 1250 (part of entry for day 27); perhaps also fragmentary ostracon ONL 6730 (in its entirety?).
[293] Donker van Heel, 'Individual handwriting', 74, n. 134 and 135.
[294] Donker van Heel, 'Individual handwriting', 72-76.

Dynasty recording daily deliveries of commodities is O. DeM 164, which covers I and II *ꜣḫ.t* of year 24 of Ramesses III. During the reign of Ramesses IV, numerous hieratic delivery texts that include the duty roster for the right side of the crew are known from years 1 and 2,[295] but we currently do not know of any such texts from later years of his reign. The latest attested hieratic text that records a duty roster of the right side of the crew was made during the reign of Ramesses V, and this ostracon is the only known document of this category from his reign.[296] The delivery records composed with marks thus cover a longer period of time. Two ostraca with marks date to a time before year 24 of Ramesses III, and there are 19 ostraca with marks from the reign of Ramesses IV that postdate the latest known hieratic delivery text from his reign. In contrast to the single hieratic duty roster from the reign of Ramesses V, there are 15 duty rosters recording deliveries with marks from the same reign. We cannot be certain if the absence of hieratic delivery texts from the period preceding year 24 and the period following year 2 signifies that they were never written, or if they have not survived. Yet it is remarkable that we know of such a great number of ostraca with marks from the reigns of Ramesses IV and Ramesses V, while we possess such a relatively small number of hieratic records of deliveries from that time. One is inclined to interpret the great difference between the number of hieratic documents and the number of ostraca with marks after year 2 of Ramesses IV as an indication that the Deir el-Medina scribe who occupied himself with writing hieratic delivery texts abandoned this practice for some reason.

3.3.13 Comparison of ostraca with marks and hieratic delivery texts: overlap

As was ascertained previously, there are instances of deliveries that are recorded both in hieratic texts and ostraca composed with marks.[297] A very good example of this is an ostracon inscribed with marks, ONL 300+. It records the duty roster for III and IV *pr.t* of year 31 of the reign of Ramesses III. The duty roster and deliveries for the first 19 days of III *pr.t* are also recorded by hieratic ostracon O. DeM 37. Both ostraca are in agreement with each other to a large extent, as demonstrated for example by a comparison of the first four days:[298]

		Workman	**Wood**	**Delivered by**	**Deficit**	**Fish**	**Delivered by**	**Deficit**	**Dates**	***ds* / *qb* jars**	***bi.t* bread**	***psn* bread**	**vegetables**
ONL 300+	Day 1	●	200	●	-	-	-	-	1 L	2	-	-	-
O. DeM 37	Day 1	●	200	●	-	-	-	-	1 L	2	-	-	-
ONL 300+	Day 2	●	300	●	-	-	-	-	-	-	-	-	-
O. DeM 37	Day 2	●	300	●	-	-	-	-	-	-	-	-	-
ONL 300+	Day 3	●	-	-	-	-	-	-	-	-	-	-	-
O. DeM 37	Day 3	●	-	-	-	-	-	-	-	-	-	-	-
ONL 300+	Day 4	●	300	●	-	-	-	-	2	2	10	16	-
O. DeM 37	Day 4	●	300	●	-	-	-	-	2	2	10	16	-

TABLE 43. COMPARISON OF ONL 300+ (MARKS) AND O. DEM 37 (HIERATIC)

In total there are 22 delivery texts composed with workmen's marks that cover a period for which deliveries are also recorded in hieratic sources: for these 22 ostraca with marks there are 33 hieratic sources which partially cover the same period. These hieratic documents are

[295] O. DeM 39 – 43; 47+; O. DeM 160 – 162; O. DeM 44 – 46; O. Michaelides 33; O. Ashmolean HO 133; O. DeM 401.
[296] O. Cairo CG 25609, year 1, III – IV *šmw*; discussed above, see 3.2.7.1; 3.2.7.2.
[297] Haring and Soliman, 'Ostraca with Workmen's Marks', 85-93.
[298] In this and other overviews below, a dot ● indicates that a certain detail is present in a document; letters R and L denote a delivery for or a workman of respectively the right and the left side of the crew.

not all journal texts but also include accounts of exclusively wood deliveries, or the deliveries of one or several members by the external *smd.t* personnel.

3.3.14 Comparison of ostraca with marks and hieratic delivery texts: material and provenance

If we compare the material and provenance of these 33 hieratic texts that correspond to 22 of our ostraca with marks (see the overview below), we find many similarities. The majority of the 33 hieratic texts are written on ceramic ostraca (28 documents) and were found at the Kom Sud (18 documents). The provenance of the documents is unknown in five instances. In five other instances the texts were discovered somewhere at the village of Deir el-Medina, and in four cases at the Grand Puits. Only five of these hieratic ostraca are written on limestone flakes, and one text is written on papyrus.

Ostraca with marks and their corresponding hieratic records are most frequently written on the same medium (23 instances), but there are plenty of examples (11 instances) of corresponding documents written on different media (pottery; limestone; papyrus). Similarly, corresponding hieratic records and records with marks are not always found at the same location. In nine instances and possibly in nine more, both the ostracon with marks and the hieratic document were discovered at the same spot, but in six other instances the ostracon with marks and the corresponding hieratic record have different provenances. In 10 other instances no information about the provenance of one of the documents is available.

Remarkably, ostraca that were found at the same location are not always well-matching parallels. Most corresponding documents that have a common provenance come from the Kom Sud, but ONL 6237+, an ostracon with marks, and its corresponding hieratic record O. DeM 654 were both found in the Grand Puits. Unfortunately both ostraca are poorly preserved and there are very few entries to compare. The entries that do survive do not agree to a large extent. ONL 6236+, a ceramic ostracon composed with marks from the Grand Puits, records the duty roster of two months. Hieratic ostracon O. DeM 159 records the duty roster for the first month. This document was discovered at the Kom Sud. The state of preservation of both pieces allows only for the comparison of a single day, for which the ostracon with marks records a delivery not mentioned in the hieratic document. One might interpret this discrepancy as an indication that different content is related to a different findspot. Yet, O. DeM 36, a hieratic duty roster for the other month, corresponds very well to the information preserved on ONL 6236+, despite the fact that it was also found at the Kom Sud. Similarly, ONL 297+ records the duty roster for III *šmw* with marks. The ceramic ostracon comes from the Kom Sud. Two hieratic ostraca record deliveries for the same month. The first, O. DeM 147, is an account of the deliveries and deficits of two woodcutters. It is also written on pottery and it was found at the Kom Sud as well, but regarding the exact content of the document there is no overlap with the information recorded in ONL 297+. In contrast, O. DeM 646, a hieratic journal text found at the Grand Puits recording mostly wood deliveries contains several of the same entries included in ONL 297+.

Ostracon	Date	Provenance	Material
ONL 312	R. III year 25, II *ꜣḫ.t*	Deir el-Medina ?	Limestone
O. UC 39626	R. III year 25, II *ꜣḫ.t*	Unknown	Pottery
ONL 332	R. III year 25, IV *pr.t* – 26, I *šmw*	Deir el-Medina ?	Pottery
O. Berlin P 12633+	R. III year 25, IV *pr.t* – 26, I *šmw*	Deir el-Medina ?	Pottery
ONL 6237+	R. III year 26, II – IV *šmw*	Grand Puits	Pottery
O. DeM 654	R. III year 26, III – IV *šmw* ?	Grand Puits	Pottery
ONL 317+	R. III year 26, IV *ꜣḫ.t*	Kom Sud	Pottery
O. Berlin P 12629	R. III year 26, IV *ꜣḫ.t*	Deir el-Medina ?	Pottery
O. DeM 142	R. III year 26, IV *ꜣḫ.t*	Kom Sud	Pottery
O. IFAO 284+	R. III year 26, IV *ꜣḫ.t*	Kom Sud ?	Pottery
O. Ashm. 1086	R. III year 26, IV *pr.t*	Unknown	Limestone

O. Turin N. 57153	R. III year 26, IV *pr.t* – 27, I *šmw*	Deir el-Medina ?	Pottery
ONL 338+	R. III year 28, IV *šmw* – I *ꜣḫ.t*	Deir el-Medina ?	Pottery
O. DeM 427	R. III year 28, III *šmw* – I *ꜣḫ.t*	Grand Puits	Limestone
O. DeM 156+	R. III year 28, IV *šmw* – epag. days	Kom Sud	Pottery
ONL 305+	R. III year 29, IV *ꜣḫ.t*	South Wadi = Kom Sud ?	Pottery
O. Ashm. 127	R. III year 29, IV *ꜣḫ.t*	Unknown	Limestone
ONL 337	R. III year 29, I *pr.t*	Deir el-Medina ?	Pottery
O. DeM 152	R. III year 29, III *ꜣḫ.t* – 30, III *ꜣḫ.t*	Kom Sud	Pottery
O. DeM 147	R. III year 29, IV *ꜣḫ.t* – 30, IV *šmw*	Kom Sud	Pottery
O. Turin N. 57007	R. III year 29, I – II *pr.t*	Deir el-Medina ?	Limestone
ONL 297+	R. III year 30, III *šmw*	Kom Sud	Pottery
O. DeM 646	R. III year 28, IV *pr.t*, 30, II – IV *šmw*	Grand Puits	Pottery
O. DeM 658	R III year 30, II – IV *šmw*, III *ꜣḫ.t*	Grand Puits	Pottery
O. DeM 147	R. III year 30, IV *ꜣḫ.t* – IV *šmw*	Kom Sud	Pottery
O. Ashm. 1084	R. III year 30, IV *šmw*	Unknown	Limestone
O. DeM 145	R. III year 30, IV *šmw* – II *ꜣḫ.t*	Kom Sud	Pottery
O. DeM 658	R. III year 30, II – IV *šmw*, III *ꜣḫ.t*	Grand Puits	Pottery
ONL 6222	R. III year 30, IV *šmw*	Kom Sud	Pottery
O. DeM 147	R. III year 29, IV *ꜣḫ.t* – 30, IV *šmw*	Kom Sud	Pottery
ONL 299	R. III year 30, I *ꜣḫ.t*	Kom Sud	Pottery
O. DeM 145	R. III year 30, IV *šmw* – II *ꜣḫ.t*	Kom Sud	Pottery
ONL 298+	R. III year 30, IV *ꜣḫ.t*	Deir el-Medina ?	Pottery
O. DeM 144	R. III year 30, II - IV *ꜣḫ.t*, II, IV *pr.t* (?)	Kom Sud	Pottery
ONL 340	R. III year 30, III – IV *pr.t*	Deir el-Medina ?	Limestone
O. DeM 35	R. III year 30, III – IV *pr.t*	Kom Sud	Pottery
O. Ashm. 1092	R. III year 31, II *ꜣḫ.t*	Unknown	Limestone
O. DeM 155	R. III year 31, II *ꜣḫ.t*	Deir el-Medina ?	Pottery
ONL 296+	R. III year 31, IV *ꜣḫ.t*	Kom Sud	Pottery
O. DeM 157	R. III year 31, IV *ꜣḫ.t*	Kom Sud	Pottery
ONL 6236+	R. III year 31, I – II *pr.t*	Grand Puits	Pottery
O. DeM 159	R. III year 31, I *pr.t*	Kom Sud	Pottery
O. DeM 36	R. III year 31, II *pr.t*	Kom Sud	Pottery
ONL 300+	R. III year 31, III – IV *pr.t*	Kom Sud	Pottery
O. DeM 37	R. III year 31, III *pr.t*	Unknown	Pottery
ONL 318+	R. III year 32, I – III *šmw*	Kom Sud	Pottery
O. DeM 153	R. III year 31 – 32, I *šmw*	Kom Sud	Pottery
O. DeM 38	R. III year 31 – 32, II *šmw*	Kom Sud	Pottery
O. DeM 39+	R. III year 32, III *šmw*	Kom Sud	Pottery
P. Turin Cat. 1949+	R. III year 32, III *šmw* etc.	Unknown	Papyrus
O. Leiden F. 2000 / 1.5	R. IV year 1, II *ꜣḫ.t*	Unknown	Limestone
O. DeM 41	R. IV year 1, II *ꜣḫ.t*	Kom Sud	Pottery
O. Turin N. 57393	R. IV year 2, II *pr.t*	Deir el-Medina ?	Limestone
O. Ashm. 131	R. IV year 2, II *pr.t*	Unknown	Limestone
ONL 316	R. IV year 2, III – IV *pr.t*	Kom Sud	Limestone
O. Prague H 25	R. IV year 2, III *pr.t*, day 23	Unknown	Limestone

TABLE 44. DUTY AND DELIVERY TEXTS COMPOSED WITH MARKS AND THEIR HIERATIC PARALLELS

3.3.15 Comparison of ostraca with marks and hieratic delivery texts: colour use

Most hieratic ostraca written by the Deir el-Medina administrators from the reigns of Ramesses III and Ramesses IV are written exclusively in black ink, although texts containing sections inscribed in red ink are occasionally attested as well.[299] Since duty and delivery records composed with marks are often inscribed in both black and red ink, one wonders if the same colour was used for corresponding hieratic entries. Analysis indicates however that in the majority of cases, there is no evident relation between the use of red ink on ostraca with marks and their corresponding hieratic ostraca. For example, the deliveries for day 6 of IV *ꜣḫ.t* are recorded with marks on ONL 317+ and in hieratic on O. Berlin P 12629. Both records agree to a great extent, but the delivery of fish to the left side of the crew is inscribed in red ink on the ostracon with marks and in black ink on the hieratic ostracon. Conversely, part of

[299] As far as the author is aware, no thorough study has been conducted as to the meaning of these red sections.

an entry concerning one unit of dates for the right side of the crew is recorded in black ink on the ostracon with marks, but in red ink on the hieratic Berlin ostracon. Comparing the records for year 30, III *šmw*, we observe that some of the entries on ONL 297+, composed with marks, and hieratic ostracon O. DeM 646 are (partially) in the same colour, but they record mostly different commodities. Perhaps the only exception is O. Glasgow D. 1925.67, which is inscribed with marks as well as in hieratic. The entry for day 9 of II *pr.t* is written in red in the hieratic account as well as in the section written with marks. Similarly, both the marks and the hieratic text recording day 10 are written in black ink. This single exception aside, there is by and large no apparent relation between the use of red and black ink in corresponding entries on ostraca with marks and hieratic documents. This supports the idea that the use of black and red ink on ostraca with marks is not meaningful but that different colours were, at least in several cases, used at different stages of the documentation.

3.3.16 The right and the left side of the crew

It is clear that hieratic delivery texts from the end of the reign of Ramesses III and the beginning of the reign of Ramesses IV record the duty roster for the workmen of the right side of the crew.[300] As there is evidence that at earlier and later times the service of the *wrš* duty was performed both by a member of the right side and a member of the left side on the same day,[301] it has been theorised that records of the left side of the crew from the period of year 24 of Ramesses III to year 2 of Ramesses IV did exist but had never been found.[302] There is however one exception, preserved on O. Ashmolean HO 127, a hieratic journal text recording the duty roster and deliveries for the first half of a month in year 29. The workmen that are recorded on duty in this text certainly belong to the left side of the crew.[303] The ostracon is not very precisely dated. The number of the month in the date line is IV, but the season has not survived.[304] It was reconstructed to "IV *pr.t*" by Helck,[305] but it is now much more plausible that the document dates instead to IV *ꜣḫ.t*. That is suggested by ONL 330+, a duty and delivery text composed with marks. This ostracon definitely records year 29, IV *ꜣḫ.t*, and the entries for days 9 – 22 are more or less completely preserved. When we compare the deliveries for days 10 to 15 in ONL 330+ with those recorded by O. Ashmolean HO 127 we see that the documents are in agreement to a large extent:

		Workman	**Wood**	**Delivered by**	**Deficit**	**Fish**	**Delivered by**	**Deficit**	**Dates**	***ds* / *qb* jars**	***bi.t* bread**	***psn* bread**	**vegetables**	**Additional**
ONL 330+	Day 10	● R	-	-	-	-	-	-	-	-	8	8	-	-
O. Ashm. 127	Day 10	● L	-	-	-	-	-	-	-	-	8	8	-	-
ONL 330+	Day 11	● R ● L	-	-	-	-	-	-	-	1	-	-	-	-
O. Ashm. 127	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ONL 330+	Day 12	● R	-	-	-	-	-	-	1 R	2	-	-	-	-
O. Ashm. 127	Day 12	● L	-	-	-	-	-	-	1 R	2	-	-	-	-
ONL 330+	Day 13	● R	-	-	-	-	-	-	-	-	-	-	-	-
O. Ashm. 127	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ONL 330+	Day 14	● R	-	-	-	-	-	-	1+x L	-	-	-	-	-

[300] Gutgesell, *Die Datierung* I, 67-73; Janssen, 'Literacy and letters', 85.
[301] During the reign of Siptah, see Gutgesell, *Die Datierung* I, 67; during the second half of the 20th Dynasty, see above, 3.2.7.1.
[302] Gutgesell, *Die Datierung* I, 73; Janssen, 'Literacy and letters', 85.
[303] Gutgesell, *Die Datierung* I, 71-72; Haring, 'Between Administrative Writing and Work Practice', [4].
[304] *KRI* VII, 299.
[305] Helck, *Die datierten und datierbaren Ostraka*, 312.

O. Ashm. 127	Day 14	● L	-	-	-	-	-	-	1+x L	1 L	-	-	-	-
ONL 330+	Day 15	● R	…	…	…	…	…	…	…	…	…	11	…	…
O. Ashm. 127	Day 15	● L	-	-	-	-	-	-	-	-	10	11	-	-

TABLE 45. COMPARISON OF ONL 330+ (MARKS) AND O. ASHMOLEAN 127 (HIERATIC)

The fact that both these documents largely record the same deliveries would suggest that O. Ashmolean HO 127 dates to year 29, IV *ꜣḫ.t* as well. Yet, the corresponding entries are remarkable, because O. Ashmolean HO 127 records the duty roster of the left side while ONL 330+ contains the duty roster of the right side of the crew. This seems to indicate that even during the last years of the reign of Ramesses III and the first years of the reign of Ramesses IV, members of the left side of the crew were – at least on one occasion and perhaps more frequently – on *wrš* duty alongside their colleagues of the right side. For some obscure reason it might have been superfluous for hieratic scribes and the scribe of ostraca with marks to record the duty roster for the members of the left side, and it is completely unclear why this was done in the case of O. Ashmolean HO 127. Perhaps there was something special about their participation in the *wrš* duty during this month, because a trace of it seems to permeate in the ostracon with marks as well. In the entry for day 11 we read on ONL 330+:

The entry is almost perfectly comprehensible: "day 11, Huynefer [on *wrš* duty], 1 *ds* jar of beer", but then mark follows. This mark is not a reference to a member of the *smd.t* personnel. Instead, we know this sign to be a workmen's identity mark that is well attested in the 19th as well as in the 20th Dynasty. The same mark is attested on O. ARTP 99/27,[306] which records a list of members of the left side of the crew datable to the reign of Ramesses IV. Through different channels, mark on this ostracon is identifiable as Bakenwerel (vii), a workman of the left side of the crew. It could well be that it is this workman who is recorded for *wrš* duty on year 29, IV *ꜣḫ.t* day 11 on ONL 330+, together with Huynefer of the right side. Regrettably we cannot verify this, because day 11 is not recorded on O. Ashmolean HO 127, and after the entry for day 10 it continues with day 12.

3.3.17 Comparison of ostraca with marks and hieratic delivery texts: corresponding entries and discrepancies

It has been demonstrated above that, apart from corresponding entries, there are also discrepancies between ostraca with marks and their corresponding hieratic texts. Although deliveries were recorded both with marks and in hieratic documents during the reigns of Ramesses III and Ramesses IV, these two branches of administration often record different data for the exact same day.[307] Take for example ONL 318+, which registers the duty roster and deliveries for II *šmw* of year 32 with marks. It overlaps to a great extent with hieratic ostracon O. DeM 38, which is a journal text recording the duty roster, deliveries, grain rations, events and labour activities for year 32 II *šmw*. However, if we only examine the first five days of the month (overview below), we notice several differences. There are deliveries (day 3, vegetables; day 5, *ds* beer jars and vegetables) and details (day 1, *smd.t* agent delivering fish; entire entry for day 2) that are not recorded in the ostracon with marks. Vice versa there are deliveries (day 5, dates) and details (day 5, workman on *wrš* duty) that are not mentioned in the hieratic text.

[306] To be discussed below, see chapter 4, 4.2.8.
[307] Cf. Haring and Soliman, 'Ostraca with marks', 88-89.

		Workman	Wood	Delivered by	Deficit	Fish	Delivered by	Deficit	Dates	*ds* / *qb* jars	*bi.t* bread	*psn* bread	vegetables	Additional
ONL 318+	Day 1	●	-	-	-	80	-	-	-	-	-	-	4	-
O. DeM 38	Day 1	●	-	-	-	80	●	-	-	-	-	-	4	●
ONL 318+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
O. DeM 38	Day 2	●	-	-	-	-	-	-	-	-	-	-	-	●
ONL 318+	Day 3	●	-	-	-	-	-	-	1 R	4	-	-	-	-
O. DeM 38	Day 3	●	-	-	-	-	-	-	1 R	4	-	-	6	●
ONL 318+	Day 4	●	-	-	-	-	-	-	1 L	-	-	-	4	-
O. DeM 38	Day 4	●	-	-	-	-	-	-	1 L	-	-	-	4	-
ONL 318+	Day 5	●	-	-	-	-	-	-	3 R	-	-	-	-	-
O. DeM 38	Day 5	-	-	-	-	-	-	-	-	3 R	-	-	4	-

TABLE 46. COMPARISON OF ONL 318+ (MARKS) AND O. DEM 38 (HIERATIC)

In other instances, hieratic documents and ostraca with marks record the same commodities, but in different amounts. For example, if we compare ONL 338+, an ostracon with marks that records the duty roster and deliveries for the last days of IV *šmw* and the first days of I *ꜣḫ.t* of year 28, to O. DeM 427, a hieratic journal text containing deliveries, labour activity and inactivity and events for III and IV *šmw* and the beginning of I *ꜣḫ.t* of the same year, we notice different quantities of *bi.t* bread and *psn* bread for IV *šmw* day 30 and I *ꜣḫ.t* day 4:

		Workman	Wood	Delivered by	Deficit	Fish	Delivered by	Deficit	Dates	*ds* / *qb* jars	*bi.t* bread	*psn* bread	vegetables	Additional
ONL 338+	Day 30	●	-	-	-	-	-	-	-	2	10	12	-	-
O. DeM 427	[Day 30]	…	…	…	…	…	…	…	1	2	7	8	…	…
…														
ONL 338+	Day 4	●	-	-	-	-	-	-	-	-	2	8	-	-
O. DeM 427	Day 4	●	…	…	…	…	…	…	…	…	4	[…]	…	●

TABLE 47. COMPARISON OF ONL 338+ (MARKS) AND O. DEM 427 (HIERATIC)

Still, a detailed comparison of hieratic documents and ostraca with marks indicates that a slight majority of entries is in agreement with each other. As mentioned above, our corpus includes 22 ostraca with marks that record deliveries for periods that are also covered by hieratic documents, 33 in total. Together, these 55 texts contain 249 day entries that are completely preserved in the hieratic document as well as in the corresponding document with marks, which are therefore appropriate for our comparison. These 249 day entries allow us to compare individual recorded elements: the quantities or deficits of a certain commodity. In the remainder of this chapter we shall refer to these elements as 'quantities'. The term 'day entry' will be used to describe the string of elements containing a day number, its accompanying workmen's mark, and – in most cases – the accompanying quantities. In order to account for those days during which not a single delivery was made, we shall count the day entries that are fully preserved in both the hieratic documents as well as in the ostraca with marks and for which not a single delivery is mentioned in both types of record as a single corresponding quantity. In cases where a hieratic document records deliveries of one category of commodities exclusively, e.g. fish deliveries, we shall only look at deliveries of that commodity on the corresponding ostracon with marks.

Comparing the 249 corresponding day entries in this manner, we find that there are 193 instances (for 142 day entries) in which the same quantity is mentioned both in the document with marks as well as in the hieratic record. There are 60 instances of a quantity

(for 45 day entries) that is recorded in the hieratic document, but not in the corresponding ostracon with marks, while there are 57 quantities (for 44 day entries) that are recorded in ostraca with marks but not in the corresponding hieratic document. In eight cases, (for eight day entries) the same commodity is mentioned in the hieratic document as well as in the document with marks, but the hieratic document records a higher quantity. The opposite, where a specific delivery is mentioned in both types of records, but with a higher amount in the document with marks, is attested in 11 instances (for 10 day entries).

In summary, of all comparable day entries c. 60% of the quantities is in perfect agreement, while there is a discrepancy for c. 40% of the quantities (CHART 3). This great percentage of disagreeing deliveries and deficits is difficult to explain. Our comparison also demonstrates that neither of the two branches of administration systematically records greater quantities of commodities. The relation between the hieratic records and the ostraca with marks is therefore still unclear. We will return to this matter at a later point.[308]

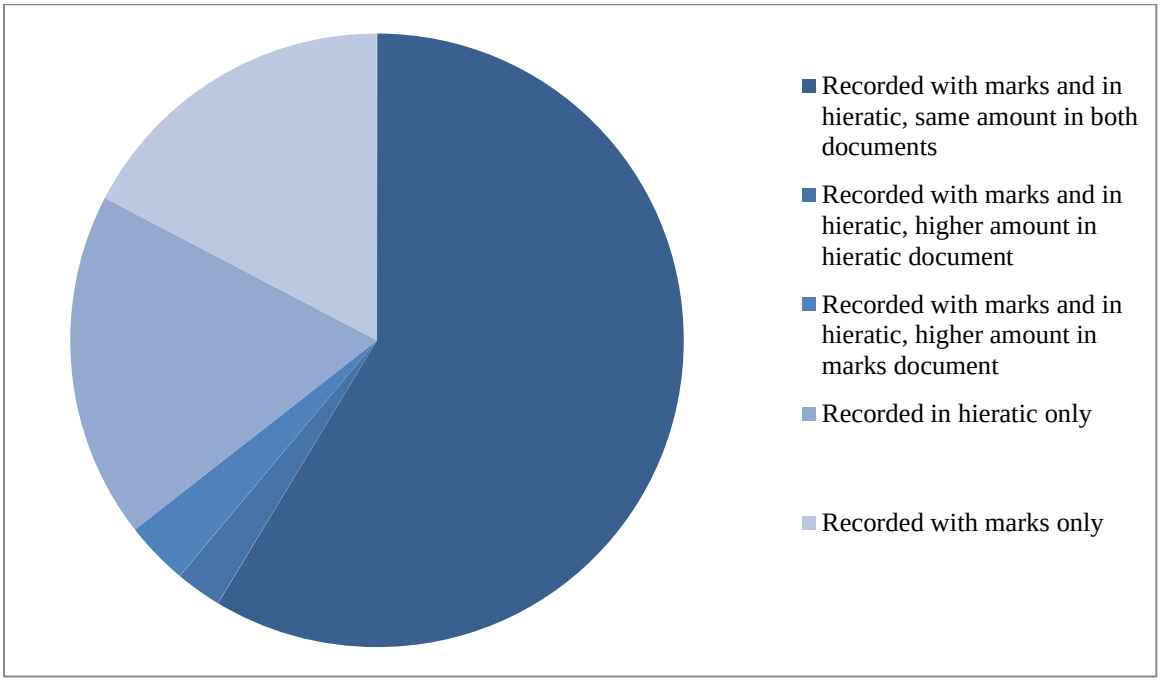

CHART 3. RATIO OF CORRESPONDING AND DISAGREEING QUANTITIES (DELIVERIES AND DEFICITS)

3.3.18 Comparison of ostraca with marks and hieratic delivery texts: degrees of detail

In the previous section we have investigated to what extent the quantities of a certain commodity recorded in ostraca with marks agree with the quantities recorded in hieratic documents. Another aspect that is worth comparing is to what degree each administrative branch records additional details about the deliveries. In order to do so, we focus here only on quantities of *ds* jars of beer, dates, wood and fish, because these deliveries sometimes include supplementary information: the identity of the *smd.t* member responsible for the deliveries is oftentimes recorded, the side of the gang for which the commodity is destined is sometimes mentioned, and in the case of wood deliveries we occasionally read about *sṯꜣ.w.t*.[309]

There are 104 deliveries that are completely preserved and that correspond perfectly in both the hieratic documentation and in the administration kept with marks. Comparison of the details recorded for these corresponding elements leads to the following figures:

[308] See below, 3.3.19.
[309] Perhaps a *sṯꜣ.t* 'board' according to Janssen, 'The woodcutters', 17.

Details regarding the delivery of *ds* jars

Both records are in agreement: 27 instances
Marks record details not mentioned in hieratic 0 instances
Hieratic records details not mentioned in documents with marks 3 instances:
- O. Berlin P 12629, day 7: mentions the side of the gang
- O. DeM 35, day 16: mentions the side of the gang
- O. DeM 39, day 2: mentions the side of the gang

Details regarding the delivery of dates

Both records are in agreement: 17 instances
Marks record details not mentioned in hieratic 1 instance:
- ONL 318+, day 14: mentions the side of the gang

Hieratic records details not mentioned in documents with marks 3 instances:
- O. DeM 35, day 13: mentions the side of the gang
- O. DeM 155, day 12: mentions the side of the gang
- O. DeM 157, day 24: mentions the side of the gang

Details regarding the delivery of wood

Both records are in agreement: 31 instances
Marks record details not mentioned in hieratic 0 instances
Hieratic records details not mentioned in documents with marks 13 instances:
- O. Turin N. 57153, day 30: mentions the side of the gang
- O. DeM 646, day 11: mentions the name of *smd.t* member
- O. DeM 145, day 5: mentions two *sṯz.w.t*
- O. DeM 145, day 19: mentions the name of *smd.t* member
- O. DeM 145, day 21: mentions six *sṯz.w.t*
- O. DeM 35, day 19: mentions name of *smd.t* member
- O. DeM 37, day 11: mentions name of *smd.t* member
- O. DeM 153, day 30: mentions name of *smd.t* member
- O. DeM 39+, day 10: mentions name of *smd.t* member
- O. DeM 39+, day 11: mentions name of *smd.t* member
- O. DeM 39+, day 15: mentions name of *smd.t* member
- O. Ashmolean HO 131: mentions name of *smd.t* member
- O. Prague H 25: mentions 2 *sṯz.w.t*

Details regarding the delivery of fish

Both records are in agreement: 2 instances
Marks record details not mentioned in hieratic 1 instance
- ONL 317+, day 7: mentions name of *smd.t* member

Hieratic records details not mentioned in documents with marks: 6 instances:
- O. Berlin P 12629, day 6: mentions name of *smd.t* member
- O. DeM 142, day 4: mentions name of *smd.t* member
- O. DeM 142, day 6: mentions name of *smd.t* member
- O. DeM 142, day 7: mentions side of the crew
- O. DeM 142, day 22: mentions name of *smd.t* member and side of the gang
- O. DeM 38, day 1: mentions name of *smd.t* member

We find that of these 104 deliveries, 77 corresponding deliveries (74.0%) display an equal amount of detail. In only two instances (1.9%) a delivery recorded in an ostracon with marks contains more details than the corresponding entry in a hieratic source, whereas in 25 instances (24.0%) the hieratic record is more elaborate than the corresponding entry in an ostracon composed with marks. The scribe of such documents with marks was thus, generally speaking, less concerned with the destination of goods and with the individuals responsible for their delivery, but focused instead more on the duty roster and the quantity of the deliveries.

Both this comparison of details as well as our previous analysis of agreeing and disagreeing quantities in corresponding documents indicate that there are several differences

between hieratic ostraca and ostraca with marks that both record deliveries for a specific number of days. Hence, one record is never a full reproduction of the other.

To explain this one could say that, even though duty and delivery records composed with marks and in hieratic have a common subject matter, they were written completely separately from each other, and as a consequence differ from each other in several instances. Yet, this is unlikely for a number of reasons. Many of the records of deliveries from the late reign of Ramesses III and the early reign of Ramesses IV, both composed with marks and written in hieratic, were found at the same location: the dump site of the Kom Sud. This could well mean that they were at one point kept together at an administrative office in the village. Furthermore, we have ascertained that an accomplished hieratic hand is sometimes interspersed among ostraca composed with marks, suggesting that a Deir el-Medina scribe involved in the administration of deliveries understood, read, and edited ostraca with marks. What is more, marks connected with hieratic numerals are found in the margins of a small number of hieratic delivery texts, and were possibly added by the scribe of duty and delivery texts composed with marks. It is thus extremely unlikely that both branches of administration existed entirely independently from each other.

A much more plausible explanation would be that hieratic ostraca were written after consultation of ostraca with workmen's marks. Hieratic records, mostly journal texts, are generally more complete documents than records composed with marks, as they mention the destination of a delivery and the identity of *smd.t* members more often, and frequently record details about activity at the work site and other events. The scribe of these documents may therefore have made use of the ostraca with marks to complete his journal texts. In doing so, he may have amplified, or perhaps improved, the records with information obtained from other channels, perhaps transmitted orally. Other details, such as the side of the crew to which a commodity was to be sent, may not yet have been determined at the moment the commodities were entered in the record with marks, but could have been available to the hieratic scribe when he composed his journal text.

The hypothesis that the hieratic journal texts were copied from other documents stands in complete opposition to the ideas of Christopher Eyre. He believed that the separate entries in journal texts had been added to a document on a daily basis, and stated that it was unlikely such texts were composed from drafts for a number of reasons.[310] Firstly, he argued, the day entries usually do not each start on a new line but were written in continuous lines. Unfortunately Eyre did not refer to any specific documents, but a quick glance at some of the hieratic journal texts reveals that there are plenty of ostraca in which a new day entry was begun on a new line.[311] Additionally it may be disputed whether a composition in continuous lines would have been an inconvenient format, as Eyre put it, for a text composed from a draft. As a second point Eyre drew attention to the fact that the internal ordering of commodities listed per day entry differs from entry to entry, suggesting the journal texts were not composed from separate documents with records of one specific commodity.[312] This may be true, but it would not rule out the possibility that journal texts were copied from ostraca with marks since these records too note all deliveries collectively. Finally, Eyre remarked that mistakes in the hieratic journal texts occur mostly at the beginning of the entries. Here the name of the workman on duty was sometimes forgotten or corrected, explained as "carelessness in making the day's first entry". Eyre pointed out that on the other hand, no errors were made in the notation of the deliveries further down the entry, mistakes that in his

[310] Eyre, *Employment and Labour Relations*, 36.
[311] To name a few examples: O. DeM 33; O. DeM 34; O. DeM 35 (partially); O. DeM 36; O. DeM 37; O. DeM 39 (partially); O. DeM 40 (partially); O. DeM 41; O. DeM 42 (partially); O. DeM 43 (partially); O. DeM 45; O. DeM 46 (partially).
[312] Eyre, *Employment and Labour Relations*, 36.

opinion would have been made if the texts were copied from drafts.[313] This view seems too narrow. Mistakes in the notation of the workman on *wrš* duty may also be explained as errors in the draft that were consequently copied onto the journal ostraca and then needed to be corrected once the scribe noticed the inaccuracies. Indeed, the ostraca composed with marks similarly contain mistaken and corrected marks for the men on duty. Furthermore, there may well be mistakes in the deliveries recorded in hieratic journal texts, but Eyre could not detect them because he did not possess the drafts: some of the discrepancies between the hieratic records and the records composed with marks could be mistakes that occurred in the process of copying one document onto the other.

3.3.19 Copying and duplication

In order to explore the question if data recorded on ostraca composed with marks were copied onto hieratic documents, we may consider the case of ONL 317+, a duty and delivery text composed with marks for year 26, IV *ꜣḫ.t*, and O. DeM 142, a hieratic journal text recording fish deliveries and deficits for several days in year 26, IV *ꜣḫ.t* and the beginning of I *pr.t*. In terms of the delivery of fish for the days 4 to 8 of IV *ꜣḫ.t* both documents are largely in agreement:

		Workman	**Wood**	**Delivered by**	**Deficit**	**Fish**	**Delivered by**	**Deficit**	**Dates**	***ds* / *qb* jars**	***bi.t* bread**	***psn* bread**	**vegetables**
ONL 317+	Day 4	●	-	-	-	360 R 360 L	-	-	-	-	-	-	-
O. DeM 142	Day 4	-	-	-	-	360 R 360 L	- ●	-	-	-	-	-	-
ONL 317+	Day 5	●	-	-	-	-	-	-	-	-	-	-	-
O. DeM 142	-	-	-	-	-	-	-	-	-	-	-	-	-
ONL 317+	Day 6	●	-	-	-	600 L	-	-	1 L	1 R	-	-	-
O. DeM 142	Day 6	-	-	-	-	600 L	●	-	-	-	-	-	-
ONL 317+	Day 7	●	-	-	-	950	●	-	1 R	1	-	-	8
O. DeM 142	Day 7	-	-	-	-	950 R	●	-	-	-	-	-	-
ONL 317+	Day 8	●	-	-	-	450 400 L	-	-	-	-	-	-	-
O. DeM 142	Day 8	-	-	-	-	400 R 400 L	● -	-	-	-	-	-	-

TABLE 48. COMPARISON OF ONL 317+ (MARKS) AND O. DEM 142 (HIERATIC)

One remarkable discrepancy is found on day 8. The hieratic account of fish deliveries clearly records on this day 400 units of fish for the right side of the crew and 400 units for the left side.[314] ONL 317+ records the same amount of fish for the left side, but for the right side the amount of 450 is mentioned. Scrutinising this entry (FIG. 9) we find that a red check mark was added below the numeral 400, and that the numeral '50' was redone in red ink. The retracing with red ink was probably done because the initial black numeral was not particularly well executed. In fact, this poorly written numeral may explain the difference between the marks ostracon and the hieratic document, if we assume that O. DeM 142 was written by a hieratic scribe who consulted ONL 317+, and copied the fish deliveries from it. The numeral for '50' would then have been mistaken by the hieratic scribe for  , the sign of right side of the crew. Admittedly, this numeral does not look much like the hieratic sign for  in the hand of the scribe of O. DeM 142, but it definitely does not resemble his numeral '50' either (FIG. 10 B

[313] Eyre, *Employment and Labour Relations*, 36-37.
[314] http://www.ifao.egnet.net/bases/archives/ostraca/?id=5907.

and C). Indeed it is plausible that a hieratic scribe would have confused the hieratic numeral '50' with the hieratic sign for  . Firstly, a glance at Möller's hieratic palaeography provides three instances of sign (FIG. 11) that are very similar to the numeral in ONL 317+. Secondly, the hieratic scribe might have interpreted the numeral '50' as the sign for the right side in analogy with the sign for the left side that is clearly added to the second amount of 400 units of fish immediately following the entry in ONL 317+. The hieratic scribe perhaps expected that the side was specified for the first numeral as well, but it is clear that the scribe of ONL 317+ omitted the sign for the right side in some instances,[315] probably because a delivery to the right side was by default. He similarly refrained from specifying the destination of the wood deliveries for days 7 and 22, and it is only thanks to O. DeM 142 that we know they were sent to the right side of the crew.

FIGURE 9. ONL 317+ OBVERSE, L. 8, DETAIL

A **B** **C** **D** **E**

FIGURE 10. **A: EXAMPLE OF THE SIGN FOR THE 'RIGHT SIDE OF THE CREW' ON ONL 317+ OBV., L. 7**
B: EXAMPLE OF THE SIGN IN HIERATIC OSTRACON O. DEM 142 OBV., L. 13
C: EXAMPLE OF THE SIGN IN HIERATIC OSTRACON O. BERLIN P 12629, OBV., L. 4
D: EXAMPLE OF THE NUMERAL '50' IN HIERATIC OSTRACON O. DEM 142 OBV., L. 4
E: EXAMPLE OF THE NUMERAL '50' IN HIERATIC OSTRACON O. BERLIN P 12629, OBV., L. 5

FIGURE 11. THREE EXAMPLES OF THE HIERATIC SIGN FOR FROM MÖLLER, *HIERATISCHE PALÄOGRAPHIE* II, 52, NR. 579

If this reconstruction is correct, the attempt of the scribe of ONL 317+ to adjust his badly written numeral failed, and the hieratic scribe of O. DeM 142 who consulted the ostracon with marks misread his handwriting.[316] This would explain a discrepancy between the two ostraca,

[315] Something similar might occur on ONL 318+ reverse, day 10 where two quantities of wood are recorded and the sign for the left side is inscribed in between the two numerals, although it is not clear to which of the two it belongs.

[316] Alternatively, there may be a third document situated in between the chain of transference of data from ONL 317+ to O. DeM 142. As argued below (p. 257-258, n. 316; p. 259; p. 265) the latter document may be an extract of a hieratic journal text O. Berlin P 12629 that records the duty roster, deliveries, and events for the first half of IV *ꜣḫ.t*. Unfortunately O. Berlin P 12629 is difficult to read at the point where the fish deliveries of day 8 are inscribed. The beginning of line 6 records a quantity of 400 units of fish, after which a much faded red

but more importantly it would be another indication that a hieratic scribe was able to decipher duty and delivery ostraca composed with marks, and that he consulted them in order to write hieratic documents.

Duplication of information from one document to another is attested in the hieratic administration of Deir el-Medina on several occasions. Still, this practice is not fully understood because in many cases there are alarming differences between one text and its duplicate. Such differences have been interpreted as mistakes of the scribes.[317] These discrepancies between corresponding documents occur also in the work of a Deir el-Medina scribe who wrote the majority of the hieratic delivery texts during the end of the reign of Ramesses III and the beginning of the reign of Ramesses IV, and who was in the habit of duplicating data from one text to another. He is the hieratic scribe thought to be Hori, [318] the same man that may have collaborated with the author of all duty rosters composed with marks. A few examples of this practice were signalled and examined by Donker van Heel. One case concerns O. DeM 40+, recording deliveries for year 1, I *ꜣḫ.t* days 1-30, and O. DeM 41, a record of deliveries for the subsequent month. The entry for day 1 on the latter ostracon refers to a deficit of wood that is first mentioned for day 30 on the preceding ostracon. It is thus plausible that the scribe made use of O. DeM 40+ to write the entry for II *ꜣḫ.t* day 1 on O. DeM 41.[319]

A more evident case of duplication are ostraca O. DeM 45+ and O. DeM 46,[320] both journal texts recording, among other things, deliveries and the duty roster, made by the same scribe. The first ostracon records the entire month of year 2, II *ꜣḫ.t*, and continues with days 1-5 of the following month, III *ꜣḫ.t*. These five days are also recorded on O. DeM 46, which covers all 30 days of III *ꜣḫ.t*. Why this information was duplicated is not immediately clear. Donker van Heel argued that, as it was this scribe's habit to start the records of a new month on a new ostracon, he copied the last entries from O. DeM 45+ in order to begin O. DeM 46 with day 1, as he was wont to do.[321] Yet, we face an odd problem with these two ostraca. Although the majority of the entries is perfectly duplicated, the two documents are not entirely in agreement. Ignoring the duties rosters for the moment, we read about the following deliveries:

O. DeM 45+		**O. DeM 46**	
III *ꜣḫ.t* day 1	**Wood from Ptahmose** for II *ꜣḫ.t* day 30**: 155** From Pades: wood **155** and faggots 7	III *ꜣḫ.t* day 1	- From Pades: wood **150** and faggots 7 for II *ꜣḫ.t* day 30
III *ꜣḫ.t* day 2	From Pades: wood 175 Total: 330 - -	III *ꜣḫ.t* day 2	Wood 175 from Pades Total: 330 **for II *ꜣḫ.t* 30.** **His deficit: 170**
III *ꜣḫ.t* day 3	*psn* bread **24** wood **160** from Bakenkhonsu	III *ꜣḫ.t* day 3	*psn* bread **20** wood **166** from Bakenkhonsu

inscription begins. It was suggested by the editors of Deir el Medine Online that the numeral '400' was to be read at the end of this rubricum, see http://dem-online.gwi.uni-muenchen.de/fragment.php?id=307. Together with the kind assistance of Maren Goecke-Bauer, who gracefully supplied a high-resolution image of the ostracon, this could be confirmed. In the light of the data gained from O. DeM 142, we are virtually certain that this second numeral '400' also concerns a quantity of fish. If this reconstruction is correct, it must have been the scribe of O. Berlin P 12629 who misread ONL 317+.

[317] Janssen, *Village Varia*, 14-15.

[318] Donker van Heel, 'Individual handwritings', 72-82.

[319] Donker van Heel, 'Individual handwritings', 76.

[320] Donker van Heel, 'Individual handwritings', 76-77.

[321] Donker van Heel, 'Individual handwritings', 76.

	- -		**for II *ꜣḫ.t* 30** **His deficit: 280**
III *ꜣḫ.t* day 4	*ds* jars 7 dates 2 wood 166 from Pades - -	III *ꜣḫ.t* day 4	*ds* jars 7 dates 2 wood 166 from Pades **for II *ꜣḫ.t* day 30 to fill it.** **Deficit: 4**
III *ꜣḫ.t* day 5	Fish 1250 *dbn* from Khonsumose Amenkha	III *ꜣḫ.t* day 5	Fish 1250 *dbn* from Khonsumose From Amenkha son of Amenemone: **Fish 1100 *dbn***
III *ꜣḫ.t* day 6	Fish 300 **Amenemone: fish 1100**	III *ꜣḫ.t* day 6	Fish 300 *dbn* -

TABLE 49. COMPARISON OF O. DEM 45+ AND O. DEM 46

The discrepancies have been noticed by a number of authors, but they were not able to explain them.[322] It is clear however that O. DeM 46 (a record of the entire month of III *ꜣḫ.t*) was written after consultation of O. DeM 45+ (a record of the entire month of II *ꜣḫ.t* and only the first few days of III *ꜣḫ.t*).[323]

Two other ostraca from year 1 of Ramesses IV provide a very similar instance of the duplication of data. The documents in question, O. DeM 47 and O. Berlin P 12641+, are hieratic journal texts, most likely written by the same scribe as well. O. DeM 47 probably recorded the entire months of I and II *pr.t* and the first four days of III *pr.t*, while the Berlin ostracon is completely dedicated to III *pr.t*.[324] Without paying attention to the duty roster, we find information about the following deliveries:

O. DeM 47		**O. Berlin P 12641+**	
III *pr.t* day 1	**From Ptahmose: wood 312** Fish 140 *dbn* from Amenkha son of Amenemone	III *pr.t* day 1	- From fisherman Amenkha: fish 140
III *pr.t* day 2	-	III *pr.t* day 2	-
III *pr.t* day 3	From Amenhotep: wood 324	III *pr.t* day 3	From Amenhot[ep] […]
III *pr.t* day 4	*ds* jars 2; dates 1 for the right side From Amenhotep: wood 200 to complete 500, 20 of them are charged to Khaemnun	III *pr.t* day 4	*ds* jars 2 dates 1 for the right side Wood 200 from Amenhotep […]

TABLE 50. COMPARISON OF O. DEM 47 AND O. BERLIN P 12641+

Once more we notice that, although the two documents are largely in agreement, there is a delivery of a quantity of wood that is only recorded in O. DeM 47 and not in the Berlin ostracon. O. DeM 47 is therefore the most complete ostracon, hence it would seem most logical that the scribe had written O. Berlin P 12641+ by consulting O. DeM 47.[325]

There are several more instances of the duplication of data from ostraca recording commodities that were brought to necropolis workmen during the reigns of Ramesses III and Ramesses IV, although these ostraca were not necessarily written by the same scribe. Firstly, there are ostraca O. Berlin P 12629, which we have already briefly discussed above, and O. DeM 142.[326]

[322] Janssen, *Village Varia*, 14, n. 7; Donker van Heel, 'Individual handwritings', 77.
[323] Cf. Donker van Heel, 'Individual handwritings', 77.
[324] Donker van Heel, 'Individual handwritings', 77-78.
[325] Cf. Donker van Heel, 'Individual handwritings', 78.
[326] Probably written by the same scribe who wrote several delivery texts at the end of the reign of Ramesses III and the beginning of the reign of Ramesses IV, see Donker van Heel, 'Individual handwritings', 74, n. 135.

O. Berlin P 12629		**O. DeM 142**	
[…]	[…] *ps* jar 1 right side; left side, fish 600 *dbn* from Su[tekhmose] (?)	IV *ꜣḫ.t* day 6	- Left side, 600 from Sutekhmose
[…]	[Amenemo]pe; dates 1 right side; *ps* jar 1 left side […] fish 950 *dbn*	IV *ꜣḫ.t* day 7	- - - **Right side,** fish, 950 *dbn* **from Amenkha son of Khonsumose**
IV *ꜣḫ.t* day 8	Mose; […] fish 400 *dbn*; [fish] 400 *dbn*	IV *ꜣḫ.t* day 8	- Right side, 400 from Amenemheb son of Tun; left side, 400

TABLE 51. COMPARISON OF O. BERLIN P 12629 AND O. DEM 142

Our next example is similar to the pair formed by ostraca O. DeM 47 and O. Berlin P 12641+ that we have already discussed above. It concerns two journal texts that document deliveries, one of which records the first days of the following month, which was recorded – probably in its entirety – on a separate ostracon. Both entries for III *ꜣḫ.t* day 1 are in agreement with each other:

O. DeM 155[327]		**O. Prague H 14**[328]	
III *ꜣḫ.t* [day 1]	[…] Ptahmose: wood 300 […]	Year 31, III *ꜣḫ.t*, day 1	From Ptahmose: wood 300 for II *ꜣḫ.t* day 30

TABLE 52. COMPARISON OF O. DEM 155 AND O. PRAGUE H 14

However, other cases of duplication demonstrate more discrepancies. To start with, there is the curious example of O. DeM 658. This document records wood deliveries for a number of consecutive months[329] and although no year number is preserved on the ostracon, we are able to date it to year 30 of the reign of Ramesses III on the basis of O. DeM 646. The latter ostracon is an account of wood deliveries as well, although a quantity of bread is also mentioned. The deliveries of O. DeM 646 concern the months of year 29, IV *pr.t*, and months II – IV *šmw* of year 30.[330] The ostraca therefore have a common subject matter, and even though O. DeM 658 is rather fragmentary, there are a few days that are recorded in both documents:

O. DeM 646		**O. DeM 658**	
III *šmw* day 3	From Tja-ʿa: wood 440 From Sary: wood 480 *psn* bread 10; *bỉ.t* bread [6]	[…]	[…] [x +] 180
III *šmw* day 4	From Bakenkhonsu: wood 1[50]		
-	-	[…]	[…x + ?] 130
III *šmw* day 6	**160 Bakenkhonsu**		
III *šmw* day 8	From Bakenkhonsu: wood 180; **total: 500**	Day 8	From him: wood 180 -
III *šmw* day 11	From Tja-ʿa: wood 418		
III *šmw* day 1[4]	From Tja-ʿa and Iuferikh: wood	[…]	[…]

[327] Records deliveries for II *ꜣḫ.t* days 3 – 30 and III *ꜣḫ.t* day 1, after which the ostracon breaks off.
[328] Records deliveries for III *ꜣḫ.t* days 1 – 15, after which the ostracon breaks off.
[329] Records deliveries for III *šmw*, day [3]; [5 ?]; 8; 15; 20; IV *šmw*, 2; 10; 19; III *ꜣḫ.t*, 3; […]; 10; 15; […].
[330] Records deliveries for year 29, IV *pr.t*, 10; year 30, II *šmw*, 2; 21; 22; 24; III *šmw*, 3; 4; 6; 8; 11; 14; 15; 17; 19; 26; 29; 30; IV *šmw*, day 1.

	19 From Bakenkhonsu: wood 332		Bakenkhonsu: wood 332[331]
III *šmw* day 15	Wood 166	Day 15[332]	From him: wood [40 + x ?]
-	-	[…]	[Amen]wahsu: wood 570
III *šmw* day 17	From Sary: wood 432	-	-
III *šmw* day 19	From Tja-'a: 380	-	-
-	-	Day 20	Right side: from Amenwah[su] […]

TABLE 53. COMPARISON OF O. DEM 646 AND O. DEM 658

The deliveries of Sary on day 3 and of Bakenkhonsu on day 8 and day 14 are recorded in both ostraca, but the remaining entries are hardly in agreement. O. DeM 646 is probably the more complete document as it includes deliveries of bread and mentions totals omitted in O. DeM 658, but on the other hand O. DeM 646 does not document the deliveries of Amenwahsu that are found in O. DeM 658. The relation between the two ostraca thus remains unclear. A similar mysterious connection exists between O. DeM 658 and O. DeM 145.[333] The latter ostracon records wood deliveries and for some days also the duty roster for year 30, IV *šmw* – II *ꜣḫ.t*, and thus partly overlaps with O. DeM 658:[334]

O. DeM 145		**O. DeM 658**	
Year 30 IV *šmw* day 2	Coming from Amenwahsu: wood 120 From Bakenkhonsu: wood 280	IV *šmw* day 2	Right side: from him: wood 120; From Bakenkhonsu […]
IV *šmw* day 4	**From Bakenkhonsu – Nakhtmin [on duty] – wood: 176**	-	-
IV *šmw* day 5	**From Bakenkhonsu: wood 160 and 2 *sṯꜣ.t*; Reshupeteref [on duty]**	-	-
IV *šmw* day 10	From Bakenkhonsu: wood 250; Hori [on duty]	[IV *šm*]*w* day 10	Right side: from Bakenkhonsu: wood 250. **[…] [x+?]150**
IV *šmw* day 11	**Coming from Bakenkhonsu: wood 200**	-	-
IV *šmw* day 19	Coming from Bakenkhonsu: wood 160; Khaemnun [on duty]	{III} <IV> *šmw* day 19	Right side: from Ba[kenkhonsu: wood] […]
IV *šmw* day 21	Coming from Bak[e]nkhonsu: wood 200 and 6 *sṯꜣ.t*; {from} Penanuqet [on duty]	[…]	[…]

TABLE 54. COMPARISON OF O. DEM 145 AND O. DEM 658

As it did for O. DeM 646, O. DeM 658 contains a few duplicated entries for O. DeM 145, recorded for days 2 and 10 and perhaps day 19. On the other hand, O. DeM 145 records several other wood deliveries that are for some inexplicable reason not present in O. DeM 658. Conversely, O. DeM 658 records a delivery for day 10 that is not documented by O. DeM 145. O. DeM 145 seems to be the more complete text and so we may suppose that the

[331] Incorrectly transcribed by Černý as "532", pl. 15; but see photos of this ostracon at http://www.ifao.egnet.net/bases/archives/ostraca/?id=7566.

[332] Incorrectly transcribed by Černý as "Day 5", pl. 15; but see photos of this ostracon at http://www.ifao.egnet.net/bases/archives/ostraca/?id=7566.

[333] O. DeM 145 was probably also written by the same scribe who wrote many of the hieratic delivery texts discussed above as well as several other journal texts, see Donker van Heel, 'Individual handwritings', 74, n. 135.

[334] Year 30, IV *šmw*, 2; 4; 5; 10; 11; 19; 21; 23; epagomenal days; I *ꜣḫ.t*, 9; 10; 14; 18; 19; 21; 29; 30; II *ꜣḫ.t*, 1; 10.

scribe of O. DeM 658 consulted it to create the latter document, but we can only guess why several deliveries were excluded.

Many odd discrepancies are also observed in the following three instances of duplicated delivery texts from the reigns of Ramesses III and Ramesses IV. In the first case there are O. DeM 36[335] and O. DeM 392.[336] The latter ostracon is an account of deliveries of wood and expenses for several days in year 31[337] that seems to have been consulted by the scribe who wrote O. DeM 36, a more complete journal text that records the duty roster, wood deliveries and events for II *pr.t* of the same year:[338]

O. DeM 36		**O. DeM 392**	
II *pr.t* day18	From woodcutter Ptahmose: wood **1600**; from Bakenkhonsu: wood **730** for I *pr.t* day 20; **total wood: 29[80]**	II *pr.t* day 18	Ptahmose: wood **1300** From Bakenkhonsu: wood **710** -
[…] 19[339]	From woodcutter […] […]**345**	Day 19	From him: [wood] **2300**

TABLE 55. COMPARISON OF O. DEM 36 AND O. DEM 392

The second case involves O. Berlin P 10634, a brief account of fish deliveries made during the first month of the *ꜣḫ.t* season of an unknown year, and O. Brussels E. 3214,[340] an account of fish deliveries by fishermen Seti and Sutekhmose during months I – III *ꜣḫ.t* of an unknown year. The Berlin ostracon is somewhat difficult to read, and although different scholars have read the day numbers as 21 and 13,[341] Helck pointed out the similarity with the Brussels ostracon, which records days 11 and 12.[342] The parallel is plausible, and as the Berlin ostracon appears to contain the most details the scribe of this piece perhaps used information from the Brussels ostracon to write O. Berlin P 10634. Still we are at a loss as to why he then omitted the quantity of wood delivered by Seti on day 12.

O. Berlin P 10634		**O. Brussels E. 3214**	
I *ꜣḫ.t* day 21[sic?]	Seti son of Khamet: 450	I *ꜣḫ.t* day 11	From Seti […] 450
I *ꜣḫ.t* day 13[sic?]	**Nebmehyt: fish: 325 *dbn*** - This day: from Sutekhmose: fish: **325 *dbn*** Total: 650 Memorandum concerning the papyrus roll and the ink	I *ꜣḫ.t* day 12	- **From Seti: 400 [+ x ?] […]** This day: from Sutekhmose: **fish: 321**

TABLE 56. COMPARISON OF O. BERLIN P 10634 AND O. BRUSSELS E. 3214

[335] Another document from the hand that wrote so many delivery texts, see Donker van Heel, 'Individual handwritings', 74, n. 135; 75.

[336] This text was written by a different scribe as argued by Kathrin Gabler, *Who's who around Deir el-Medina. Prosopographische Untersuchungen des Versorgungspersonals (smd.t / n bnr / n pꜣ ḥr) für die Arbeitersiedlung und das Tal der Könige.* PhD Dissertation. Munich and Basel (forthcoming). Her ideas are supported by palaeographic observations of Maren Goecke-Bauer, personal communication, 2015.

[337] Recorded are II *pr.t* 18; 19; 28; 29.

[338] Recorded are II *pr.t* 1-4; [...] 14 – 20.

[339] The obverse of O. DeM 36 deals with II *pr.t*, while the entry that might refer to day 19 of this month is situated on the reverse. It is unclear if this day 19 belongs to II *pr.t* as well; the reverse opens with a date: "Year 31 I *pr.t* day 19" after which the line becomes illegible. One line below, there is another numeral 19 after a damaged bit, presumably for "Day 19", followed by a damaged entry recording a wood delivery. It is possible that this entry deals with II *pr.t* day 19, since it is skipped over on the obverse, but that is not certain.

[340] *KRI* VII, 316.

[341] http://dem-online.gwi.uni-muenchen.de/fragment.php?id=152.

[342] Helck, *Die datierten und datierbaren Ostraka*, 317.

Equally problematic are the ostraca in our third case: O. Cairo CG 25635, an account of the wood deliveries of Bakenkhonsu during year 31, II and III *šmw*,[343] and O. DeM 154,[344] a journal text recording deliveries and the duty roster for II *šmw* of the same year.[345] As O. DeM 154 is the more detailed text, we suppose once again that this text was written using the notes from O. Cairo CG 25635. Yet, comparison of the two documents demonstrates that the amounts recorded for days 20 and 21 do not agree, that a delivery on day 22 is not recorded by O. Cairo CG 25635, and that a delivery on day 30 is not recorded by O. DeM 154.

O. Cairo CG 25635		**O. DeM 154**	
Day 20	[Bakenkhonsu: wood] **146**	II *šmw* day 20	Coming from Bakenkhonsu: wood **148**
Day 21	[Bakenkhonsu: wood] **308**	II *šmw* day 21	Coming from Bakenkhonsu: wood **146**; from Ptahmose: wood 274
-	-	II [*šmw* day 2]2	**Coming [from Bakenkhonsu:] wood 300 and 3 *sṯȝ.t***
		[II *šmw* day 23]	[…] [wood 100 + x] […]; *psn* bread 12; *bỉ.t* bread 8
		II *šmw* day 24	Coming from Ptahmose: wood 200; [the potter fulfils] 750; beer: 2 *ds* jars
		[Day 2]5	Mose
		Day 26	Menna
		[Day] 27	Nakhtmin. From Khonsumose: fish 244
		[Day] 28	Hori
		Day 29	Iyerniutef. Coming from the potter: 2 units, 55 *ṯb.w* for II *šmw* day 30; deficit: 65 Coming fro[m Ptahmose: wood] 270; beer: 2 *ps* jars
Day 30	**[Bakenkhonsu: wood] 330; total: 630** Commissioning Pawekhed: wood 90; deficit: 40. -	II *šmw* day 30	- - Coming from Ptahmose: wood 270 Coming from Ptahmose: wood 280 This day: commissioning his son […] [Weighing the …]

TABLE 57. COMPARISON OF O. CAIRO CH 25635 AND O. DEM 154

Our final case of duplication is most interesting: O. DeM 39+ and P. Turin Cat. 1946 + 1949. Both documents form the basis for the hypothesis that most documentary ostraca were in fact drafts, used to compose large journal texts on papyrus, which were either sent to the central administration in Thebes in original form, or in copy or extract.[346] Once again we see that the corresponding day entries in the two documents record different matters:

[343] Recorded are II *šmw*, 2; 4; 6; 8; 13; 16; 20; 21; 30; III *šmw*, 30.
[344] Yet another text made by the scribe of several delivery texts, see Donker van Heel, 'Individual handwritings', 74, n. 135.
[345] Recorded are II *šmw*, […] 16-30. Compare Wolfgang Helck, *Materialien zur Wirtschaftsgeschichte des Neuen Reiches*. (Teil V). *III. Eigentum und Besitz an verschiedenen Dingen des täglichen Lebens. Kapitel AI – AL*. Abhandlungen der Geistes- und Sozialwissenschaftlichen Klasse 4 (Mainz 1965), 869.
[346] Černý, *Community*, 226-227; Valbelle, *Les ouvriers*, 49 and n. 6; Janssen, 'Literacy and Letters', 94; Donker van Heel, 'Drafts', 36-37.

O. DeM 39+		**P. Turin Cat. 1946 + 1949 vso. I**	
III *šmw* day 11	Hori - **From Ptahmose: 340 wood**	III *šmw* day 11	- Inactive -
III *šmw* day 12	Weserhat - **270 from Bakenkhonsu** - -	III *šmw* day 12	- This place - ***ds* jars 2** **dates 1**
III *šmw* day 13	Minkhau -	III *šmw* day 13	- This place
III *šmw* day 14	Iry-ʿa *ds* jars 2 dates 1 **right side** -	III *šmw* day 14	- *ds* jars 2 dates 1 - **vegetables […]**
III *šmw* day 15	Harshire - *psn* bread 8 *bỉ.t* bread 8 From Mehy: 277 *dbn* fish From woodcutter Amenhotep: 480 wood	III *šmw* day 15	- Working *psn* bread […] *bỉ.t* bread 8 […]
III *šmw* day 16	Iyerniutef - ***ds* jars 2** Passing away of the king	III *šmw* day 16	- This place - Announcement of the passing away of the king

TABLE 58. COMPARISON OF O. DEM 39+ AND P. TURIN CAT. 1946 + 1949 VSO. I

We are not at all certain about the relation between the papyrus and the ostracon, or about the purpose of both documents.[347] What is clear is that the scribe of the papyrus was not interested in documenting wood deliveries and the duty roster. He did note the deliveries of *ds* jars, dates, vegetables and different types of bread for some days, but apparently not as consistently as the scribe of the ostracon did, omitting several deliveries. On the other hand, he records such goods on days for which they are not attested on the ostracon. In contrast to the scribe of the ostracon, the scribe of the papyrus does not seem to have been concerned with such details as the destination of a commodity to one of the two 'sides' of the crew. It is possible that the scribe of the papyrus used the ostracon while composing his text, choosing to include certain elements of the ostracon as he went along, perhaps indeed in an attempt to produce a document with a neat appearance for the expected audit by the scribes of the vizier.[348]

Our brief – and probably incomplete – survey of the duplication of information regarding deliveries and the duty roster in the hieratic administration of the end of the reign of Ramesses III and the beginning of the reign of Ramesses IV suggests that the practice of copying, or at least, of consulting older documents, was not uncommon. We may distinguish four different types of duplication of information: 1. journal texts composed on ostraca, information from which was incorporated into greater journal texts written on papyrus;[349] 2. journal texts covering successive months, with one text reiterating data already noted in the text of the previous month;[350] 3. accounts of deliveries of a particular commodity made during

[347] Cf. Eyre, *Employment and labour relations*, 43-44; Donker van Heel, 'Drafts', 36.
[348] Donker van Heel, 'Drafts', 36-37.
[349] O. DeM 39+ and P. Turin Cat. 1946+.
[350] O. DeM 40+ and O. DeM 41; O. DeM 45+ and O. DeM 46; O. DeM 47 and O. Berlin P 12641+; O. DeM 155 and O. Prague H 14.

a specific timeframe, one of which seems to be less complete than the other and may have served as a draft for the more complete text;[351] and 4. accounts of deliveries of a certain commodity that are also recorded in more detailed journal texts.[352] Regarding the accounts in this last category, we may wonder whether they served as drafts for journal texts. That could be the case, but the accounts might just as well have been extracts of journal texts. Such accounts are concerned with one particular commodity, either wood deliveries or fish deliveries, and may have been composed using earlier texts in order to calculate deficits.

We will return to this question in an instant, but before we do so it is important to note that many instances of duplication of information involve texts written by a single scribe. Oddly, inexplicable discrepancies in the quantities of the recorded deliveries occur in the majority of these pairs of documents, while some details are omitted altogether. These differences in two corresponding documents occur so often that it is hard to explain them as mere mistakes. While these inconsistencies in hieratic documents are enigmatic, we are by now quite familiar with such matters because we have seen that the exact same sort of discrepancies exist between duty and delivery records composed with marks and corresponding hieratic texts.

In fact, a closer look at ostraca composed with marks and hieratic administrative texts indicates that the practice of duplication of information is more complex than previously assumed, because for some of the hieratic duplicates mentioned above another duplicate composed with marks exists as well:

> 1. Ramesses III, year 26, IV *ꜣḫ.t* days 4-8 are recorded in hieratic ostraca O. Berlin P. 12629 and O. DeM 142, but also by ONL 317+
> 2. Ramesses III, year 30, III *šmw* days 3-15 are recorded in hieratic ostraca O. DeM 646 and O. DeM 658, but also in ONL 297+
> 3. Ramesses III, year 30, IV *šmw* days 3-21 are recorded in hieratic ostraca O. DeM 145 and O. DeM 658, but also in O. Ashmolean HO 1084
> 4. Ramesses III, year 32, III *šmw* days 11-16 are recorded in hieratic ostracon O. DeM 39+ and P. Turin Cat. 1946+, but also by ONL 318+

In our first group of ostraca there are no discrepancies with the exception of the delivery of fish for day 8, which as discussed above might be due to a misinterpretation of a sign on ONL 317+. This ostracon composed with marks and O. Berlin P 12629 have more in common, as both documents record the duty roster and daily deliveries, while O. DeM 142 is only concerned with fish. In the next group of documents, it is clear that the record with marks is a better parallel for O. DeM 646 than for O. DeM 658. The latter text records several deliveries which are not attested on the ostracon with marks. The third group of ostraca is somewhat difficult to compare as O. DeM 658 is very fragmentary. Yet, O. DeM 658 seems to omit several deliveries recorded on O. DeM 145, and therefore O. Ashmolean HO 1084 is more in agreement with O. DeM 145.

We notice that, in all these cases, the records composed with marks display a greater degree of similarity to the more complete of the two corresponding hieratic documents, in most cases a journal text. That is noteworthy. As was argued above, there are indications that the ostraca with marks were copied, or rather transcribed, by the scribes of hieratic journal texts. If this hypothesis is correct this would suggest that hieratic journal texts were written before the accounts of a single commodity were produced. This follows from the fact that 1) it is unlikely that the scribe of documents with marks copied the hieratic accounts, and 2) the hieratic journal texts are more in agreement with ostraca composed with marks than hieratic

[351] O. DeM 646 and O. DeM 658; O. DeM 145 and O. DeM 658; perhaps O. Berlin P 10634 and O. Brussels E. 3214.
[352] O. Berlin P 12629+ and O. DeM 142; O. DeM 154 and O. Cairo CG 25635.

accounts are, suggesting that in the chain of the transference of information they are situated closer to the mother copy, i.e. the ostracon with marks, than the accounts are. As a consequence, the hieratic accounts must be extracts from rather than drafts for hieratic journal texts.

The last group of corresponding documents is interesting because it concerns an ostracon with marks, a hieratic ostracon and a hieratic papyrus.[353] Both ostraca are clearly related to each other, and we observe few discrepancies between these documents. There are no details mentioned in the ostracon composed with marks that are absent in the hieratic ostracon but present in the papyrus. If this had been so, that would be a strong indication that the scribe of the papyrus would have read, or at least would have had knowledge of the content of, the ostracon composed with marks. Since this is not the case, we may propose that scribe of the papyrus had only consulted the hieratic ostracon. This ostracon in turn records much of the same information documented by the ostracon with marks. Almost all of the data correspond perfectly, although the ostracon with marks lists deliveries of *ds* jars for days 13 and 19 that are left out in the hieratic document, which in turn mentions some deliveries that are omitted on the marks ostracon such as a quantity of fish for day 15 and a quantity of wood on day 20. In addition, the hieratic ostracon records several events such as the passing away of king Ramesses III. Naturally, such details are not included in the ostracon written with marks.

It is therefore hieratic ostracon O. DeM 39+ that, of all three documents, is most complete. Considering the limited knowledge of hieratic script displayed by the scribe who used marks to record information, it is very unlikely that he copied from hieratic sources. His ostracon was therefore probably composed before the other two documents were. There is little overlap between the ostracon with marks and the hieratic papyrus, but the content of the hieratic ostracon is closely related to that of the ostracon with marks. It is thus plausible that this hieratic scribe did make use of the ostracon with marks when he composed his journal text. This hieratic record may then in turn have been consulted, albeit to a very limited extent, by the scribe of the hieratic papyrus.

3.3.20 Conclusions

Duty and delivery documents composed with workmen's marks seem to record a minimum of data, all concerned with the daily delivery of goods, occasionally the deficits of goods, and the individuals involved in the process of delivery, most importantly the workmen who were on *wrš* duty. The duty roster that is included in the ostraca with marks almost exclusively involves workmen of the right side, but in at least one instance there are strong indications of the existence of a simultaneous duty roster of the left side. The turnus, the rotating system of *wrš* duties, must have had a predominantly functional character, because, as we have seen, several changes took place in the order of workmen on duty towards the end of the reign of Ramesses III.[354] These changes were painstakingly recorded and mistakes were corrected. Moreover, numerous check marks (19 out of 36) were added to the workmen's marks, presumably during a review of the document. Even though ostraca with marks regularly include details about the identity of the *smd.t* members responsible for certain deliveries, deficits and the destination of a commodity to a particular side of the crew, the documents are in this respect less elaborate than hieratic documents of the same genre.

[353] It should be mentioned here that P. Turin Cat. 1946+ belongs to a group of (fragmentary) journal texts inscribed on papyri from the reign of Ramesses III, which still await publication. Therefore it is very likely that there are more papyri that are duplicates of ostraca with marks and ostraca inscribed in hieratic.

[354] See above, 3.2.3.1 – 3.2.3.6; 3.2.5; 3.2.7.2 – 3.2.7.8; the shifts and replacements during the end of the reign of Ramesses III are summarised in Collier, 'Integrating Hieratic and Marks Data'.

The palaeography and the consistency in subject matter and lay-out of the ostraca that record deliveries and the duty roster with marks suggest that a single individual authored virtually all of these documents. The ostraca reveal a systematically organised branch of the Deir el-Medina administration. Nevertheless, the ostraca are evidently non-canonical in character and differ greatly from documents written by formally trained administrative scribes. That is evident in the unusual situation of different entries on the available surface of the document, but even more so in the non-standard references to months and festivals. All evidence indicates that a single workman devised his own system of notation, using hieratic numerals, self-invented signs and workmen's marks. This individual was not a fully trained hieratic scribe, as suggested by the absence of hieratic inscriptions, the deviant lay-out of his documents and some scribal errors made in the inscription of hieratic numerals. Nevertheless, the scribe of the ostraca with marks was to some extent acquainted with hieratic script, and in most instances he noted down hieratic numerals without any problems. His knowledge of script is also reflected in the signs he used to refer to commodities, members of the *smd.t* personnel, and months. These include hieratic biliteral signs (e.g. *ḫ*ˁ for Amenkha; *ms* for Ptahmose and Khonsumose) and triliteral signs (e.g. *ḥtp* for *ỉmn-ḥtp* and *pȝ-ỉmn-ḥtp*; *wsr* for *wsr-ḥȝ.t-nḫ.t*). On the other hand, the scribe appears to have had a preference for uniliteral signs:

s	for *sw*; for *sȝry*
b	for *bỉ.t* bread
ḥ (+ *t*)	for *ḥȝ.t* in *ḥȝ.t-nfr*; for *ḥr* in month *ḥw.t-ḥr*
ḫ	for *ḫnsw* in *bȝk-n-ḫnsw*; *ḫnsw-ms*; for *ḫnt.y* in *pn-pȝ-ḫnt.y*
p	for *pȝ* in *pȝ-ds*; *pn-pȝ-ḫnt.y*; *pȝ-ỉmn-ḥtp*
ỉ	for *ỉmn* in *ỉmn-m-ỉn.t*; *pȝ-ỉmn-ḥtp*

Particularly the usage of the signs *ḥ* and *t* instead of the sign *ḥȝ.t* to refer to the fisherman Hatnefer are illustrative of the extent of his familiarity with script. It seems that uniliteral signs were more accessible than multiliteral signs to someone without formal scribal training.

Although the records with marks appear to be the output of one man, there are clear indications that a hieratic scribe with a neat hand aided the marks scribe in four instances. Cooperation is also suggested by hieratic journal texts recording deliveries that contain workmen's marks and hieratic numerals in their margins. The fact that records of deliveries written with marks and written in hieratic often have a common provenance supports the idea that the scribe of ostraca with marks and presumably a single hieratic scribe occasionally joined forces.

Evidence for revision of ostraca with marks is found in the form of check marks, later additions, and corrections. They illustrate the importance of the documents. Such elements also demonstrate that the documents were composed in several stages. That is suggested moreover by the frequent use of a different colour of ink for corrections and additions. Additionally, some scribal mistakes are unlikely to have been made if the document had been written at a single time rather than at different stages. Consecutive stages in an ostracon are often recognisable by a single series of entries written in one particular colour. Some scribal errors indicate that such sections could have been written at a single time. As duty and delivery records composed with marks were created at different stages, a hieratic scribe involved in the administration of the deliveries could add entries to such documents. In such instances the hieratic scribe mostly employed marks rather than hieratic script. This proves that there was a hieratic scribe who was able to comprehend the delivery documents composed with marks and revised them.

The fact that many of the delivery records composed with marks were not inscribed in one session but during several stages, and that additions and corrections were made to the

documents is indicative of the function of the records. The documents are in all probability records of items that had been delivered, rather than order lists of commodities the crew of workmen wished to have delivered to the settlement. One would expect more unity in order lists, which are likely to be written in one fell swoop, with a distinct idea of what commodities were required during a specific month. Records of incoming goods, on the other hand, may be entered into the books on a daily basis or at certain intervals, at which point earlier entries may be corrected and additions can be made. It also seems less likely that order lists would specify the members of the external service personnel before the actual delivery had taken place.

The ostraca with marks were undoubtedly stored for a period of time after they were composed. This follows from the attestation of palimpsests, the existence of an ostracon with records from two different years, evidence for different phases of inscription, evidence of revision and correction, as well as the habit of adding date lines to the ostraca. Like many hieratic records of deliveries from the reign of Ramesses III, the majority of these contemporaneous ostraca with marks were deposited at the Kom Sud. However, after year 2 of Ramesses IV the provenance of the majority of ostraca with marks shifts towards the Valley of the Kings. Likewise, the use of pottery as a medium becomes less frequent and limestone is more often chosen. This new evidence challenges the view of Donker van Heel that administrative ostraca from the Valley of the Kings deal almost exclusively with labour activities at the work site and not with deliveries.[355] It would appear that this shift towards the Valley of the Kings coincides with changes in local administrative practice: after year 2 of Ramesses IV hieratic journal texts on ostraca recording the duty roster and daily deliveries ceased to be produced on a regular basis. During the reign of Ramesses IV and much of the reign of Ramesses V, such documents were predominantly created by the scribe of the ostraca with marks, and with perhaps a few exceptions such as O. Cairo CG 25609 and O. DeM 655, no longer by hieratic scribes. This development is possibly related to the delayed start of the excavation of the tomb of Ramesses IV. Janssen has demonstrated that the protests of the workmen at the beginning of year 1, and perhaps also the belated appointment of a new vizier caused the first work on the royal tomb to be postponed to year 2. It is in this year that the workforce was increased to 120 men,[356] probably to make up for lost time.[357] One may speculate that the crew of workmen resided more frequently and for longer periods at the site of workmen's huts in the Valley of the Kings because work on the construction of the royal tomb had become very demanding from year 2 of Ramesses IV onwards.[358]

Among the finds from the huts settlement near KV 18, occupied for c. 25 years from about the reign of Ramesses IV onwards,[359] there were relatively few hieratic administrative ostraca. Dorn suggested that during this time in the 20th Dynasty hieratic documents were no longer written on ostraca, but straight onto papyrus. The few hieratic documents that came from this site were tentatively explained as rare drafts of texts that were copied onto papyrus, scribal exercises, and private accounts.[360] The duty and delivery texts composed with marks from the reigns of Ramesses IV and Ramesses V indicate nevertheless that this genre of texts continued to be produced on ostraca. The use of ostraca for administration was therefore not completely abandoned, and the assumed scribal exercises may in fact have been real records.

[355] Donker van Heel, 'Drafts', 1.
[356] P. Turin Cat. 1891 rto.
[357] Janssen, *Village Varia*, 162-163. Compare also Sara Demichelis, 'Le projet initial de la tombe de Ramsès IV? Papyrus de Turin CGT 55002' *ZÄS* 131 (2004), 132-133.
[358] The age of the king could hardly be the reason that the necropolis workmen were overburdened with work on the tomb, as Ramesses IV was not extremely old at the time of his accession, c. 35 years according to Alexander J. Peden, *The reign of Ramesses IV* (Warminster 1994), 16.
[359] Dorn, *Arbeiterhütten*, 217.
[360] Dorn, *Arbeiterhütten*, 142.

It is of course possible that the information in the records composed with marks was, as proposed by Dorn, directly transferred in hieratic onto papyri.

It would thus seem that during the first half of the 20th Dynasty, the practice of using ostraca with marks to record deliveries and the duty roster is attested for a longer period than the use of hieratic ostraca for the same genre. We are unaware of such ostraca with marks from the first half of the reign of Ramesses III. As there are no similar records from the hieratic branch of administration before year 20 either, with perhaps the exception of fragmentary ostracon O. DeM 253,[361] we might interpret this as an indication that the practice of recording the duty roster and the daily deliveries was not established yet in the first years of the reign of Ramesses III.[362] This does not mean that journal texts were not composed at earlier times. P. Greg demonstrates that in the reign of Siptah journal texts were written on papyrus, perhaps also composed from daily notes written on ostraca.[363] In addition, there are plenty of delivery texts as well as some documents that seem to record a duty roster, which date to earlier times in the 19th Dynasty.[364] We can only speculate as to whether they too were synthesised into a journal papyrus.

Journal texts from the 20th Dynasty composed with marks are comparable to hieratic journal texts in terms of their length, as they both prefer to record an entire month. Similarly, during the reigns of Ramesses III and Ramesses IV there seems to have been a single scribe, perhaps Hori, who recorded most of the duty and delivery texts, alongside a single scribe, perhaps Pentaweret (iii), who recorded these matters with marks. Hieratic records are however often more elaborate and include information about distribution of goods, deliveries of goods other than the daily commodities, details about activity and inactivity at the worksite, and other events.

The duty and delivery records composed with marks were created first and foremost for the administration of the Deir el-Medina community. We come to this conclusion through the fact that one of the most characteristic features of the documents is the inclusion of the *wrš* duty roster, an organisational device that was worth recording only for the local scribes. Additionally, there are no indications that anyone outside of the community of necropolis workmen would have been able to decipher the marks and signs with which the ostraca were inscribed.

It remains difficult to explain why ostraca with marks were produced exactly. One would expect that there were enough educated scribes among the workmen of the royal necropolis to document such matters in hieratic script, but perhaps this idea should be nuanced. It has been pointed out that wick accounts from the reign of Ramesses III are much more concise and abbreviated in comparison to wick accounts of the 19th Dynasty, written with abbreviated formulas and even acronyms, such as *h* for *hɜw* 'expense'.[365] Could this be another indication that the administration of the community of necropolis workmen had, in the 20th Dynasty, become too demanding and too time consuming? Was this the reason that a semi-literate workman was commissioned to assist the village scribes by keeping records of duty roster and deliveries? We can only speculate.

But perhaps the opposite is the case: the administration of the last 10 years of the reign of Ramesses III had not become more casual, but more meticulous. There may have been a need for more checks and balances, and indeed, as we have seen there is plenty of evidence for copying and duplication of hieratic records of deliveries during the late reign of Ramesses III and the early reign of Ramesses IV. In favour of this idea weighs the fact that this is the

[361] But see above, p. 184, n. 108.
[362] Contra Janssen, 'Literacy and letters', 85.
[363] Janssen, *Village Varia*, 111-130.
[364] See chapter 5, 5.3.2.2.
[365] Donker van Heel, 'Individual handwritings', 70-71.

period in which the number of hieratic documentary texts at the Theban Necropolis reaches its peak. The increase in written administration as well as the standardisation thereof has been explained by Haring as the result of the high amount of literati in the community of Deir el-Medina, coupled with an awakened interest in the use of documents as *aides-mémoires.*[366] This may have inspired an untrained '*smd.t* scribe' to generate his own records, and his ostraca with marks could well have played a role in a complex system of bookkeeping. It is not likely that records with marks were created entirely independently from the administrative scribes of Deir el-Medina, as marks are sometimes found on hieratic ostraca, and a hieratic hand can be detected in four duty rosters composed with marks. It is equally improbable that the marks scribe converted hieratic documents into ostraca with marks, since he was not fully literate. The fact alone that the scribe of the ostraca with marks nowhere in his documents used the horizontal numerals commonly used for hieratic day numbers renders it implausible that he would have been able to read hieratic records. In contrast, there is evidence that a hieratic scribe was able to employ the system of signs and identity marks to inscribe a few entries on ostraca with marks, and was thus able to read such ostraca as well. The purpose of the ostraca with marks lies perhaps in this hieratic scribe's interest in the ostraca with marks. These records must have been created before the hieratic documents were written, and were transcribed by a scribe who wrote hieratic journal texts. A concrete indication of transcribation is provided by ONL 317+, which appears to have been misread by the scribe of O. Berlin P 12629. This suggestion is supported by the fact that many ostraca with marks were demonstrably written over the course of several phases, while the hieratic records are generally of a well-organised and neat composition by comparison. Moreover, there is no evidence of the duplication of information from one document composed with marks to another document composed with marks. This reinforces the idea that after the marks scribe had finished his month record, he no longer used it but passed it on to a hieratic scribe for him to consult during his preparation of hieratic journal texts.

The scribe of hieratic journal texts of the end of the reign of Ramesses III to year 2 of Ramesses IV seems therefore to have relied on the marks scribe to provide him with the records of the commodities that were delivered, perhaps not every month but certainly on a regular basis. As Donker van Heel suggested, the scribe of the hieratic journal texts could not have been both at the worksite and at the *ḫtm* where the deliveries were brought.[367] He therefore needed to combine data from different sources, and the ostraca with marks appear to have served as one of them. Nevertheless, there are many discrepancies between the records composed with marks and their corresponding hieratic documents. Unfortunately we are unable to fully explain these puzzling differences, but as has been pointed out, very similar and equally unexplained discrepancies exist between hieratic documents and their duplicates. We may suppose that the hieratic scribe corrected and augmented his documents, perhaps with the aid of orally transmitted information.

3.4 THE DUTY ROSTERS AS A MNEMONIC DEVICE?

It has been hypothesised in a paper by Haring that the existence of a duty roster in the community of necropolis workmen was not specifically related to the transfer of supplies and rations to the village, but that it served a more general purpose. It was viewed as a mnemonic, used "as a help to remember individual days and what had happened on them".[368] The argument was based on the suggestion that the duty roster is in hieratic administration not exclusively related to the delivery of commodities:

[366] Haring, 'From Oral Practice to Written Record'.
[367] Donker van Heel, 'Drafts', 35.
[368] Haring, 'Between Administrative Writing and Work Practice', [5].

1. The *wrš* duty is also recorded in hieratic journal ostraca that document only the absence or presence of workmen.
2. The *wrš* duty is also mentioned in legal contexts
3. Many hieratic administrative documents record deliveries without mention of the *wrš* duty roster

In addition, it was pointed out that the duty roster was recorded with marks during periods in which the roster was omitted from the hieratic administration. Haring surmised from this that the administrative scribes had no practical necessity for the duty roster, and that it was not particularly invented for the written administration. Instead, he argued, it must have existed independently from scribal practice.[369] The duty roster was seen as "[o]ne of the local habits […] presumably a mnemonic in the workmen's daily practice, even though it hardly had added value for recording the progress of work and supplies."[370] Haring contrasted the custom of administrative scribes of employing the civil calendar to date events with the ostraca that record the duty roster with marks. The latter system was therefore interpreted as a mnemonic that orginated from a local non-literate tradition.[371]

Several of Haring's observations are valid, but some refinement is in order. To begin with, the *wrš* duties do seem to be exclusively related to the organisation of the delivery of commodities. That is certainly the case for the ostraca composed with marks, but presumably also for the hieratic texts. Haring's second point that the *wrš* duty is mentioned in legal contexts is based on two documents. In both texts the scribe refers to the *wrš* duty to explain the presence of a particular workman at the office of the *ḫtm*. It is clear that he was there to await and coordinate the deliveries that were transferred to the village on that day.[372] Haring's first point is correct. Indeed the mention of the *wrš* duty in such texts is odd, but this pertains to a more general question that we have discussed in the previous sections: why did the necropolis scribes put so much effort in recording details that will have been meaningless to Theban authorities and many of the necropolis workmen alike? The mention of the *wrš* duty in such texts cannot be explained, but it constitutes no argument against the connection between the duty roster and the organisation of deliveries.

Haring's third point is true as well, and we can side with him on this statement. The hieratic scribes seem to have been selective in their mention of the duty roster. This ties in with Haring's comment that the duty roster is recorded with marks at periods when hieratic scribes seem to have had no attention for the system. Indeed, this leads to the impression that the duty roster was not devised for scribal administrative purposes but is much more a part of local and practical customs.

Whether it truly functioned as a mnemonic may be disputed. First of all, it should be remarked that the duty rosters composed with marks could not do without the civil calendar either. The 20th Dynasty duty rosters composed with marks invariably occur in combination with day dates, and the addition of month signs and year numbers was not uncommon.[373] This weighs against the idea that the system functioned independently of the civil calendar. Moreover, it is doubtful if the duty roster would have been effective as a mnemonic. It has been demonstrated in this chapter that the roster was frequently subject to modifications caused by internal shifts, the departure of workmen and the introduction of new ones. At times, these alterations were so confusing that the scribe of the ostraca with marks himself made mistakes in the notation of the correct sequence. Additionally, the ostraca show that on

[369] Haring, 'Between Administrative Writing and Work Practice', [6].
[370] Haring, 'Between Administrative Writing and Work Practice', [7].
[371] Haring, 'Between Administrative Writing and Work Practice', [7-9].
[372] See above, p. 168, n. 3.
[373] For a time when duty rosters may have been created without the mentions of day dates, see chapter 5, 5.3.2.2.

rare occasions the workmen deviated from the roster, as an individual would take over the tasks of a colleague during a particular month.

None of these aspects are the hallmarks of a functional mnemonic device. The roster makes instead much more sense as a true schedule of the individual responsibilities of the workmen to keep the delivery system running. That seems to have been its primary purpose, but it does of course not exclude the possibility that the roster, evidently an important feature of everyday life during the first half of the 20th Dynasty, came to be used as a mnemonic device as well. Significantly, the order of workmen in the duty rosters seems to be a derivative of ordered lists of the entire crew, which in turn appear to be reflections of an actual hierarchy on the workfloor. We will be introduced to such ordered name lists and their relevance in the next chapter.[374]

[374] See chapter 4, 4.1; 4.3.3.1; see also chapter 6, 6.5.4.6.