Richard Clampe, Fortress Engineer, c1617-1696

David Flintham

Abstract

The science of fortress engineering during the English Civil Wars has received scant attention in the histories of the period, and as a result, its practitioners are considerably less well known than the conflict's generals. But one military engineer who deserves to be lifted from obscurity is Richard Clampe. Clampe served with the Parliamentarian army of the Eastern Association and then the New Model Army. He was responsible for transforming the Norfolk town of King's Lynn into the strongest fortress in East Anglia, as well as the war's most well-known system of siegeworks which forced the surrender of the Royalist garrison of Newark-upon-Trent.

Key words: Clampe, Richard, Cromwell, Oliver, Dutch 'school' of fortifications, Earith Bulwark, Eastern Association, King's Lynn, Lynn Minster, Manchester, Earl of, New Model Army, Newark-upon-Trent, South Gate (King's Lynn)

Introduction

Fortress warfare was the dominating, yet commonly overlooked, aspect of the (often mistitled) 'English' Civil Wars. Contrary to public opinion, the wars were fought more in the trenches and on ramparts and walls, than in the open fields and moors. Twenty five years after the wars ended, Roger Boyle, Earl of Orrery wrote in his 'A Treatise of the Art of War' (1677), "we make war more like foxes than lions, and you will have twenty sieges for one battle." More recently, Christopher Duffy described the conflict as "a war of trenches, ramparts, palisades, bombardments and blockades". 1

The importance of fortifications and sieges is not reflected by the written word, where far more has been published about battles and campaigns. A similar trend is also apparent within the field of conflict archaeology, a rapidly developing sub-discipline within the traditional field of archaeology which has emerged in the last few years. Here too, the focus is the investigation of battles,

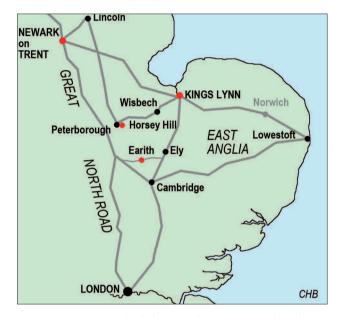


Figure 1: Eastern England showing places mentioned in the text

despite the fact that, since they tended to last considerably longer than battles, sieges leave a much greater archaeological footprint.

King's Lynn Under Siege

To conduct a thorough investigation of an English Civil War siege has been the desire of a group of archaeologists and military historians for several years,² although the challenge has been of finding a site which is suitable, both in terms of its history and local interest and commitment. Happily, this investigation has now settled in the Norfolk town and port of King's Lynn.

Whilst investigating the English Civil War fortifications of King's Lynn, the project (King's Lynn Under Siege (KLUS) - English Civil War Archaeological Project) came across the rather wonderful plan of the town's southern defences.

This plan is proving to be a key document in the understanding of how the town was fortified during the wars, as it shows the post-siege fortifications when King's Lynn was turned into the strongest fortress in the entire



Figure 2: Plan of the fortifications near the Boal, South Lynn, between Sechy River and the Haven. (NRO- King's Lynn Borough Archives, KL/C 48/16 (originally BC 21))



Figure 3: Earith Bulwark – the New Bedford River is just visible at the bottom right-hand corner. (Google Earth / Charles Blackwood)

region. This is an incredibly detailed plan, and whilst it demonstrates draughtsmanship skills, it is surely done by the hand of someone skilled in the design and planning of mid-seventeenth century fortifications. But whose hand was it?

The defences thrown up during the siege of King's Lynn were designed by an unknown man called 'Christian', and as the plan is initialled 'R.C.', it is easy, as others have done before, to jump to the conclusion that 'Christian' and 'R. C.' were one and the same man.³ But as subsequent research has identified, the R. C. in question was a certain Richard Clampe, probably best known for his plans of the siegeworks of Newark.⁴

Whilst it is not known where Richard Clampe (c.1617-1696) was born, he was certainly living and working in King's Lynn during the 1630s, (he was described as 'Physician', 'Doctor' and 'Medicus', and also "learned in mathematics and science") and he was entered as a freeman of Lynn in 1639-40.⁵ But within two years of this, however, the country was plunged into civil war.

Earith Bulwark

In early Spring 1643, Oliver Cromwell, first displaying the energy which was to become a hallmark of his later military career, occupied sites of suspected Royalist activity: Lowestoft, King's Lynn, and then Peterborough. In May 1643, a Royalist uprising broke out in the Isle of Ely, and whilst this was supressed by troops from

Cambridge, it caused enough of a scare to warrant the establishment of permanent garrisons in Ely and Wisbech.⁶ In August 1643, Cromwell was appointed governor of the Isle of Ely, and as well as ensuring that there would be no further unrest in the area, he recognised that a major threat to Parliamentarian East Anglia was posed by the Royalist garrison in Newark. Thus steps, were taken to guard the approaches to the Isle.

One such place was at Earith in Cambridgeshire. Here, a bridge crossed the New Bedford River,⁷ so was a key strategic location, and the job of fortifying it was given to Captain John Hopes and Richard Clampe.⁸ There is no record of a military career prior to the summer of 1643, and given that Clampe was in King's Lynn during the latter years of the 1630s, it is very unlikely that he saw service overseas, so it is probable that it was Clampe's skills in mathematics which brought him to the attention of the Parliamentarians. He was not the only mathematician who was able to turn these skills into military engineering (for instance, in 1604, the Dutch mathematician, Simon Stevin, designed a 'blue print' for fortifications and siege-works for Maurice of Nassau). So with no apparent previous military experience, from where did Clampe gain the skills that would serve him so well at Earith and then at King's Lynn and Newark-on-Trent? Clampe's designs do show a significant influence from the 'Dutch school' of fortification something apparent in the design of the bulwark at Earith (Dutch engineers were

involved in the drainage of the nearby fens during the 1630s, so an exchange of ideas was quite possible; a further link with Dutch 'civil' engineering was the use of the term "trench dyke" to describe a rampart).

The design at Earith was a sophisticated one. It was a detached bastioned fort, covering an area of nearly 2 hectares. Square in shape with a bastion at each corner, it was surrounded by a continuous rampart and ditch. On the west side, extending 91.4 metres, was an outwork (possibly protecting an entrance between the south-west and north-west bastions). The other sides were covered by further earthworks (probably an outer ditch (cunette), glacis, and a covered way). Within the bulwark, some three metres above the level of the ditch were artillery platforms.¹⁰

No less strategically important, but less sophisticated in design (and only feasibily the work of Clampe) was Horsey Hill Fort, which was located on the east bank of the River Nene in what is now Stanground, to the east of Peterborough. This was a pentagonal bastioned fort, covering an area of 2.2 hectares with a height (from the top of the rampart to the bottom of the ditch of over 4 metres).

The strongest fortress in East Anglia

On 10 July 1643, aware of the continued disaffections in King's Lynn, Parliament sent orders to strengthen the defences of King's Lynn. But with the Royalist Northern Army, under the command of the Earl of Newcastle, just the other side of the Wash, on 13 August, the town declared its support for the King, and Sir Hamon L'Estrange was appointed governor. The Royalists now set about strengthening the town's defences in readiness for the Parliamentarian reaction. It is not the purpose of this paper to detail the course of the siege of King's Lynn, 11 but suffice to say that blockaded from the sea by the



Figure 4: The Red Mount.

Part of King's Lynn's eastern defences, following the 1643, the site was strengthened with the addition of a bastion which can be seen to the right of the mount, towards the river. (David Flintham)



Figure 5: Hollar's plan of King's Lynn, highlighting Clampe's fortifications. Note the subtle difference in the alignment of the southern defences ('A') compared with Clampe's plan (Figure 2) (The Thomas Fisher Rare Book Library, University of Toronto) Key to Figure 5 A Clampe's Southern fortifications B South Gate Fort C Red Mount D East Gate E 'The Loke' F Northern fortifications (likely to by Clampe)

Parliamentarian fleet under the Earl of Warwick, and besieged by land by the army of the Eastern Association under the command of the Earl of Manchester, and having been abandoned to their fate by the Earl of Newcastle's Northern Army, on 15 September, the town capitulated.

The Parliamentarian siegeworks included batteries on the other side of the Ouse in West Lynn (at the time, referred to as Old Lynn), and an earth work to guard against a sally by the garrison through the East Gate. 12 There would have been other siegeworks as well (in front of the South Gate would seem one obvious location, especially as the Earl of Manchester established his headquarters at Setchey, to the south of the town). Given his experience at Earith and possibly Horsey as well, and, of course, his local knowledge as a resident of King's Lynn, it is likely that Clampe was responsible for the Parliamentarian siegeworks, and may even have been appointed then as a military engineer with the Army of the Eastern Association.

For a short time following the siege, the Earl of Manchester was acting governor of the town, but once he left the town with the army, Colonel Valentine Walton (or Wauden), Cromwell's brother-in-law, succeeded him.¹³ Walton immediately set about inspecting the existing

fortifications, attending to damaged or weak-spots. With this initial work done, attention was then given to modernising the defences, ultimately creating a bastioned enceinte surrounding King's Lynn.

Whilst Clampe's plan only covers the southern defences, there is no reason to doubt that he was responsible for the entire scheme. On the eastern side, the existing pre-siege defences were incorporated into the new scheme, new bastions being created ahead of the existing features.

To the north, the area on the northern-side of the Gaywood River (an area known as 'The Loke') was enclosed by new earth-worked fortifications running along the eastern, northern and western (river-side) sides. To the south, a new fort was built in front of the South Gate, 14 whilst running from the South Gate westwards to the River Ouse, and on the south bank of the River Nar, a new line of fortifications was constructed. The new fortifications are featured in Wenceslaus Hollar's Groundplat of Kings Lyn, 15 which was probably etched sometime during the 1650s (it is unknown whether Hollar actually visited King's Lynn, however).

Although the new defences on the east side of the town were largely comprised of reinforcing bastions, those to

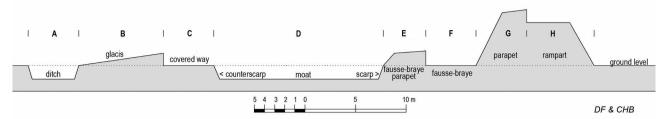


Figure 6: The profile of King's Lynn's southern defences, based on Clampe's plan, and clearly demonstrating the Dutch influence. (Charles Blackwood)

Key to Figure 6 (note: all measurements are taken from the Clampe plan (figure 2), then converted into metres) Component Width(m) Notes A Outer Ditch 5.029m Clampe refers to this as the "Ditch of counterscarp" B Glacis 8.381m Clampe refers to this as the "Counterscarp" C Covered Way 5.029m D Moat 16.763m E Parapet of Fausse-Braye 4.19m Added together, the fausse-braye would have a total overall width of 9.219m F Fausse-Braye 5.029m G Parapet 5.029m Added together, the rampart would have a total overall width of 11.734m H Rampart 6.705m

the south (and there is no reason to suppose that those to the north of the town, around The Loke, were any different) complied with Dutch practice, and Clampe's plan comprises of a fausse-braye at the foot of the rampart, then a ditch or moat, covered way, and then outer ditch outside the glacis.

A construction on this scale required a great deal of wood for revetting the parapets, and also for the construction of platforms, palisades and storm poles. Much of this came from the woods of Thomas Arundel, Earl of Surrey, at North Wootton and Kenninghall, which were felled as an involuntary contribution to the Parliamentary war-effort.¹⁶

Thus, thanks to the designs of Richard Clampe, King's Lynn was transformed into the strongest fortress in East Anglia. Parliament took the defence of the town earnestly because until the early September 1644, it was the main depository for the arms and ammunition for the Eastern Association. Munitions were shipped from London and then distributed from King's Lynn via the network of inland waterways. During the siege of York (April to July 1644), King's Lynn vessels took munitions to Hull or Selby from where they went up the (Yorkshire) Ouse in barges to the besiegers. Thus, given the importance of King's Lynn to the Eastern Association, arguably Parliament's most effective fighting force in the first years of the English Civil War, it is no surprise that the security of the town should be taken so seriously.

Whilst Clampe's defences were never put to the test, there was a threat of a further Royalist uprising at the end of 1644, when Sir Hamon L'Estrange's youngest son, Roger, received a Royal commission to lead a coup in King's Lynn. But this went the way of so much Royalist intrigue and ended in a humiliating fiasco.¹⁸

The siege of Newark-upon-Trent

The next question is how Clampe was occupied between the fall of King's Lynn and the siege of Newark more than two years later? Was he totally occupied with the refortification of King's Lynn, or did he serve elsewhere as well? The Army of the Eastern Association participated in the siege of Lincoln (3-6 May 1644), and then more notably at the siege of York (3 June – 1 July 1644; the siege actually commenced on 22 April, but the Army of the Eastern Association didn't arrive before York until 3 June). Might Clampe have participated at either of these sieges?

In 1645¹⁹ he was employed by the King's Lynn to survey the pastures and fortifications in order to work out how much land had been taken as a result of the fortifications. At the end of 1645 he was an engineer (he was described as "their chief Engineer")²⁰ with Colonel-General Poyntz's Army of the Northern Association which, alongside the Scottish Army, besieged Newark in 1645-6.

At Newark, at the beginning of 1646, a line of circumvallation to the south and east of the town was constructed. This comprised of a chain of earthwork forts linked together by a rampart and ditch (the Scots secured their hold on the Island to the west of Newark through the construction of a fortified camp, which they named 'Fort Edinburgh' - the two besieging armies maintained communication with each other through the construction of a bridges of boat across the River Trent to the north of the town). By the middle of March 1646, Newark had been completely surrounded, and the town was cut off from the outside world.

Clampe's plan of the siege of Newark is probably the most famous of all siege plans produced during the Civil



Figure 7: A description of the seidge of Newark upon Trent with the fortifications about the Towne as also the forme of all the Entrenchments forts redouts batteries and approaches made against it under the conduct of the Earle of Leven Capt: Genll: of the Scots Army and Coll: Genll: Pointz and Coll: Rosseter commanders in Cheife of the English forces, it begun the 6th of March 1645 and ended the 8th of May 1646. Described by Richard Clampe, Ingenier. (Wikimedia Commons. Original: British Library (maps) 4670 (i)- now 004897722)



Figure 8: A close-up of the plan. Could the Figure on foot be Clampe himself?

Wars, and is frequently reproduced. Whilst it is recorded that Clampe "described" the plan, the accuracy and sophistication of the plan means that it could have only come from someone who was skilled in military engineering. His plan covers a radius of approximately 3.2 km, and was engraved by Peregrine Lovell and subsequently printed and sold by Peter Stent of London. There are two versions of Clampe's plan: the first is in the British Museum, and a slightly later version in the Ashmolean Museum in Oxford.²¹ Both versions include the inscription "Described by Richard Clampe Ingenier". The version in the Ashmolean Museum includes some important minor additions; in the lower left hand corner, the three leading horsemen are identified as "His Excellency the Earle of Leven Gen. of the Scotch Army", "Coll: Rosseter", and "Coll: Gen. Pointz". In front of the horsemen is a man on foot carrying what could be a measuring-stick. Could this man be Richard Clampe?

The Royal Commission on Historical Monuments (England) book about Newark's siegeworks includes a detail consideration of both versions²² of the plan, including its scale (around 3 inches to 1 mile - the scale of the plan itself is entitled "A scale of furlongs subdevided into pearches"), and concluding that whilst there are some inaccuracies as a result of the perspective treatment of the features in terms of the Parliamentarian siegeworks, it is an accurate representation. Less so for the Royalist defences, which is not surprising given that Clampe didn't have the same degree of access to the Royalist works until the siege was over. Returning to the Parliamentarian siegeworks, the plan does show some as unfinished,

presumably because the town surrendered before the works were completed.

Although the Parliamentarians had fortified a ring of villages around Newark and in so doing blocked the approaches to Newark, as the siege progressed these were supplemented by the first line circumvallation, over 9.6 km, and this, and the subsequent closer approach, were strengthened at intervals by "redouts" and "bulwarkes" (Clampe depicts the latter as bastions, and the former as diamond-shaped enclosures). Key strategic locations were protected by larger forts (for instance, Colonel Gray's Sconce which guards the point where the two branches of the River Trent re-join to the north of Newark, and is only just smaller than the Queen's Sconce, which is the most well-known of the Royalist defensive works). Therefore, this is a plan of the third siege at its conclusion, showing the first line of circumvallation, the inner line which superseded it, the Scottish positions on the Island, and finally the Royalist defences.

The plan contains a wealth of smaller detail: there a number of little scenes, ranging from the firing of cannon to the execution of a "spie sent to Montrose". Also features are the various tented camps, including those housing the contingent of soldiers from King's Lynn (who were accommodated in 2 houses and 15 tents). Could it be that Clampe himself was housed here amongst his fellow town-folk?

The Ashmolean plan also includes "a Section or Profile of the Dimensions of the Forts and Redouts upon the Line": the earthwork rampart (possibly fronted by a

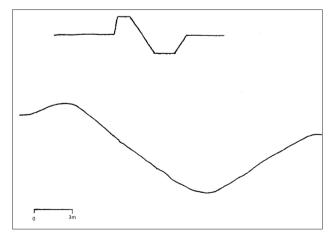


Figure 9: Clampe's profile (top) of the Dimensions of the Forts and Redouts upon the Line at Newark (show on the Ashmolean Museum's version of the plan).

A profile of the Queen's Scone (bottom) is shown by way of comparison



Figure 10: St. Margaret's, King's Lynn (now Lynn Minster), the final resting place of Richard Clampe in 1696 (David Flintham)

berm), with a low terre-plein behind, is 1.2 m wide at the top, and probably 2.1 m high. The flat-bottomed ditch is 1.5 m deep and 3.7 m wide. This is a simpler design than that which Clampe employed around King's Lynn, although two important factors should be remembered: the works at Newark were offensive works, and were constructed in a war-zone. But it demonstrates the breadth of Clampe's skills, which encompassed the state-of-the-art urban fortifications (King's Lynn), the strategic defensive site (Earith), and, at Newark, major offensive works.

At the end of the first Civil War, Clampe complained that he had not been paid for his services and could not make ends meet. As the post of Customs Searcher was vacant at King's Lynn, in December 1647 he petitioned Parliament²⁴ for the position in compensation for his unpaid expenses, an application endorsed by The Committee of the Navy. This petition says that Clampe "of Lynn in Norff" had served Parliament first under the Earl of Manchester (in the Army of the Eastern Association) and then under Thomas Fairfax (in the New Model Army), and "afterwards with the Com[tee] of Lords and Commons before Newarke, as Engineer". ²⁵ Elsewhere, Clampe is described as "their chief Enginier".

Post-war

After the war, Clampe returned to medicine, and also served on the Common Council of King's Lynn from 1655 until his resignation in 1662.²⁶ During his time on the Council, he participated in an enquiry into the proper functioning of post-Civil War poor relief raised via duty on coals. Although the tax had been collected, there was, it appears, considerable debate over what had been done with the money:

"A remarkable witness was Richard Clampe the engineer, who, having greatly assisted the parliament during the [Civil] war, petitioned for and obtained the searcher's place in our Customs. He insisted that large arrears were due to him for services rendered. The tax, as he computed, came to £1200 a year, of which only half was paid away, yet he could not say whether 'the remainder was employed or discharged towards the relief of the poor, or by what order it remained in the hands of the Mayor and Burgesses.' As he was in pressing need of money, he desired payment for what he had done (14th October 1650)".27

His resignation from the Council probably allowed him to concentrate full-time on medicine, and it is documented that in August 1666, Dr Richard Clamp received £5 "for his paynes taken about ye visited poore" during the recent outbreak of plague.²⁸

In 1696, Clampe died aged 79. His tomb in St. Margaret's, King's Lynn (now Lynn Minster) described him as "learned in mathematics and science" - Mackerell's History of Lynn records the inscription, making reference to his proficiency in languages, natural science, maths and medicine, and says that it was in the south aisle of the nave. But following the gale damage and fall of the spire into the nave in 1741, the nave was rebuilt the floor was raised by some feet above the old level and the existing memorials, including Clampe's, were lost. Indeed, as the aisles were rebuilt considerably narrower, the site of Clampe's tomb may even be outside in the churchyard. In 1875, the earth fill was removed, but this did not reveal any of the memorials. Now the floor is completely tiled.²⁹

Whilst traces of King's Lynn's fortifications remain to this day (but not, unfortunately, of the southern defences where all surface traces have disappeared), it is a pity that there isn't more of a memorial in King's Lynn to Richard Clampe. Given that just three fortified places can be associated with him with any degree of certainty, it cannot be said that Clampe was by any means prolific. In this respect, then, he is but a number of engineers whose names adorn, often quite fleetingly, the pages of the histories of the war. But what makes Clampe stand out from most of his contemporaries are his plans of King's Lynn and Newark, both of which are amongst the best fortress plans to have survived from the period. As far as King's Lynn is concerned, his plan is central to the ongoing investigations of the town's experiences during the war, and one day it might just be possible to reveal something of Clampe's plan in situ.

Acknowledgements

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Biographical Note

David Flintham is a military historian specialising in seventeenth century fortress warfare. A member of the Fortress Study Group for a number of years, he is a regular contributor to its publications. He has written 3 books (with two more in progress), and has written numerous essays and articles for a variety of audiences. Considered to be an 'expert on London's Civil War defences', he is currently involved in a London-wide archaeological project investigating London's fortifications in their entirety. David is also project manager of the King's Lynn Under Siege ECW archaeological project. A fellow of the Royal Geographical Society, his other interests include the music of Jethro Tull, malt whisky and cricket.

Notes

- 1. Taken from Harrington, P. (2003), p.6
- ^{2.} See Flintham, D.(2014) pp. 22-24
- 3. See Kent,P (1988) p. 229.
- Royal Commission on Historical Monuments (England), (1964)
 p.67, and NRO King's Lynn Borough Archives, KL/C 48/16
- The author is grateful to the Lynn Borough Archives for sharing the *Index of Mayors, Aldermen, Common Councillors, Officials and Some Others* generated by Peter Sykes in February 2002. Also see Smith. P. (2012), p. 203
- 6. Holmes, C. (1974) p. 73.
- 7. Named after the 4th Earl of Bedford who headed the 'Gentleman Adventures' who had invested in the drainage of the fens during the 1630s. The Dutch engineer, Cornelius Vermuyden (1595-1677) was hired to design and implement a drainage program
- Historic England (List entry 1013282) The Bulwark: a Civil War fieldwork and World War II gun emplacement, 150m north of Earith Bridge
- 9. William Lithgow, p. 81 and p. 82.
- ^{10.} Osborne, M. (1990) p. 25
- For an account of the siege see Ketton-Cremer, R.W. (1969) pp. 206-18, and also Yaxley, S. (editor)(1993)
- 12. Osborne, M. (2015) p. 70.
- 13. Ketton-Cremer, p. 215
- 14. The South Gate fort is the subject of a new interpretation by the town's museum.
- 15. Pennington,R. (1982). Hollar prints in this paper are identified by their Pennington citation number – this one being P987
- ^{16.} Kent, pp. 229-30
- ¹⁷. Holmes, pp. 150-51
- 18. Ketton-Cremer, pp. 275-7
- ^{19.} Smith, P. (2012) p. 203
- Royal Commission on Historical Monuments (England), (1964)
 p.67
- British Library (maps) 4670 (i) [now 004897722], and Ashmolean Museum, Clarendon II, 552
- Royal Commission on Historical Monuments (England), (1964), pp. 66-70.
- 23. The King's Lynn camp is positioned behind the bastioned fort on

- the first line of circumvallation to the north of Newark, to the east of Colonel Gray's sconce.
- 24. 27 December 1647', in *Journal of the House of Lords*: (JHL) Volume 9, 1646 pp. 614-615. and JHL Volume 10: 27 January 1648', in *Journal of the House of Lords*: Volume 10, 1648-1649 (London: House of Lords, 1767-1830), pp. 3-4.
- ^{25.} RCHM(E) 1964) p. 67.
- 26. Hillen's 1907 History of King's Lynn makes two mentions of Richard Clampe, and, in addition, there is a Corporation lease in King's Lynn's archives concerning Clampe. The lease no is 547 (calendar entry): the Corporation leased the Priory Estate from the Dean and Chapter and had sublet to a certain Thomas Toll who had died. This document is "Quitclaim by Thomas Toll junior to Mayor and Burgesses of all rents and covenants in 1637, lease and agreement by Mayor and Burgesses to assign residue of term to Richard Clampe of King's Lynn gentleman in trust for Thomas Toll February 1657." Thanks to Elizabeth James for bringing both to the author's attention.
- ^{27.} Hillen's *History of King's Lynn* (1907 p. 368). Again, with thanks to Elizabeth James.
- 28. Practitioner of the Month for March 2017 http://practitioners. exeter.ac.uk/practitioner-of-the-month/ [accessed 19 March 2018]
- ²⁹. With thanks to Elizabeth James for this information.

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