The Roman Swithland Slate Industry

by Alan McWhirr

Swithland slate roofs and tombstones are a familiar sight in Leicestershire today even though extraction of the slate ceased during the last quarter of the nineteenth century (Ramsey, 1986). In the two hundred years before that date slate had been extensively quarried and used for many different purposes besides roofs and tombstones including clockfaces, sundials, milestones, cheese presses, fireplaces and salting troughs. Despite the importance of Swithland Slate to the economy of the county between the seventeenth and nineteenth centuries, a definitive account of the industry and its demise has yet to be written and there is remarkably little in print about its use in Roman times. Several writers (McKinley, 1955, 43; McWhirr, 1972, 217: Todd, 1973, 113) have suggested that the Swithland slate industry was more important to the economy of the east Midlands in Roman times than had traditionally been thought, but no detailed analysis has been undertaken to support these statements. The purpose of this paper is to provide the evidence for that assertion.

When this research commenced, some twelve years ago, the writer received a great deal of assistance from Mr H.B. Sharp of Easton on the Hill near Stamford who was investigating the use of slate, particularly Colleyweston, and who had done a great deal of work on Roman slate in Lincolnshire. He very generously gave access to his records, including measurements of slates he had inspected, and these have been incorporated into this paper.

Written accounts of the Swithland Slate industry are not numerous. A paper on Swithland slate headstones appeared in these *Transactions* for the year 1943-4 written by Albert Herbert and with a short foreword by Lt-Col Sir Robert Martin. Sir Robert had earlier written an introduction to George Farnham's *Charnwood Forest* published in 1930 in which he touched on some aspects of Swithland slate. In the third volume of the *Victoria County History* published in 1955, there is a short and useful section, written by R.A. McKinley, on Swithland slate in the section on quarrying industries. A privately published booklet appeared in 1964 from the Leicester College of Art, School of Printing, entitled *Slate Engraving*. This book, which contained some details of Swithland slate headstones, was researched and designed by two students Peter Gwillim and Christopher Whitmore, although the guiding force behind the venture was clearly their tutor, Hugh Collinson. The topic of Swithland slate has been popular with students writing special studies and dissertations. Mrs P. Blackmore undertook such a study as part of her course at the former Leicester College of Education. A brief, but informative account of the industry, written by Mary Ball and Mike Jones, appeared in the book which was produced in 1976 to mark the formation of Charnwood District Council. Leicestershire Libraries and Information Services has recently issued a small guide written by David Ramsey (1985) and the same author has contributed one of the most thorough accounts of the industry in the *Bulletin of the Leicestershire Industrial History Society*. One expects more from the pen of David Ramsey.

The above accounts concentrate on the medieval and post-medieval use of Swithland slate. The purpose of this paper is to review the evidence for the use of slate in the Roman period.

The geology of Swithland slate has been discussed on a number of occasions, most recently by Ford (1972) and Martin (1976). It is a purple or green-grey slate which forms the third or upper divisions of the Brand series, the youngest of the Cambrian rocks and the highest known Charnian sediment and is found to the west of Leicester mainly in the parishes of Groby, Newton Linford, Swithland and Woodhouse where the outline of earlier quarries can still be seen. Whether any of these quarries were worked in the Roman period cannot be determined from what survives today, as evidence of any earlier activity has been swept away by recent workers. Petrological examination may eventually be able to narrow down the area from which slate was extracted during the Roman era. Even though it is not possible to identify the exact quarry from which the Romans obtained their slate, the area of outcrop concerned is limited and so it is possible to determine its distribution with reasonable accuracy.

It should be noted that another slate found on the eastern borders of the county was also used in Roman times and may have been confused by some people with Swithland slate. Collyweston slate is named after the village of that name which stands on the Stanford to Duddington road in Northamptonshire. In appearance it is quite different from Swithland slate.

USES

Roofing Slates

A large number of Roman roofing slates was found during the excavations of a Roman building at Narborough in 1983 and briefly reported upon in these *Transactions* by John Lucas (1984).

As is the case with other Roman roofing slates those made from Swithland slate are roughly diamond in shape with a nail hole at the head of the slate (Fig. 1). The range in sizes of Roman Swithland slates so far examined (Table 1) appears to be less than those made from Cotswolds limestone or Forest of Dean sandstone. The largest Roman Swithland slate noted comes from Narborough in Leicestershire and measures 11½″ from nail hole to the point and has a width of 9″. A similarly large slate, 11¼″ by 10″, has been found at the villa site of West Langton (Per com H.B. Aggas). The widest slate also comes from Narborough being 11″ across. At the other end of the scale the smallest slate comes from Haceby, Lincs., which was 7″ from nail hole to point and 6½″ across. The size of the 'skirt', that is the distance from the maximum width line across the slate, to the point, varies surprisingly little in the examples examined, the majority being between 3″ and 4½″. Because of this Mr H.B. Sharp was of the opinion that Roman Swithland Slate roofs were not graduated in size as has been the custom with such roofs over the past two hundred years. This view was based on the limited range in the sizes of slate examined, but with such a small sample it might be considered unwise to generalize. However, when the larger group of slates from Narborough was examined superficially by the writer in advance of a more extensive review by John Lucas, the results did seem to confirm Mr Sharp's view, The sizes of a random sample of Narborough slates is given in Table 2. A range of sizes seems to be represented, but in comparison with a modern Swithland slate roof the range is not as great and again the limited variation in the size of the 'skirt' indicates that there was little noticeable difference in the size of the visible part of the individual slates on the roof. From the ground any variation would have been difficult to spot.

Among the most interesting finds from the Narborough group of slates were several which had been used to fill in gaps at the eaves and which were, therefore, not diamond or

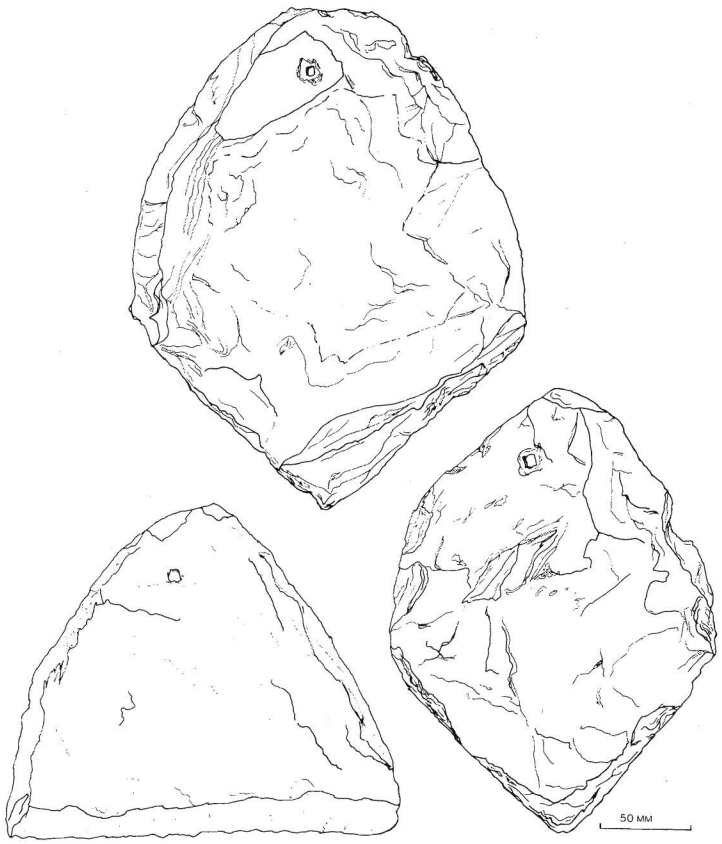

Figure 1: *Roman roofing slates from Narborough*

pointed at the bottom, but straight (Fig. 1). As Swithland slate does not split easily, roof slates tend to be thicker than 'stone slates' from other parts of the country. The thickness of those slates from Narborough which have been looked at ranges from ⅞" to 1⅜". In terms of weight the Narborough group ranges from 1.76 lbs (800 gm) to 6.28 lbs (2850 gm).

A secondary use of a roofing slate can be seen in the Jewry Wall Museum where slates have been used to cover two pots which contained cremated remains. One is from Horsefair Street (Acc. No. 28.1878) and the other from Mansfield Street (Acc. No. 1962/202).

Tesserae

There are several references in the *Victoria County History of Leicester* (hereafter VCH) to the posssible use of slate as *tesserae* in mosaic floors (VCH I). Black *tesserae* in the Blackfriars pavement were described as 'perhaps slate' (VCH I, 195). but when the floor was transfered to the Jewry Wall Museum in 1977 Theodore Sturge could not recall

any which might have been Swithland slate. Likewise David Neal did not identify any Swithland slate *tesserae* when he drew the mosaic in December 1983. John Martin, Keeper of Earth Sciences, Leicestershire Museums Service, and the writer have also inspected the floor and can find no *tesserae* which could be positively identified as Swithland slate. This must also cast doubt on other identifications of slate in mosaics which are no longer available for inspection (VCH I, 192 and 195). On present evidence we must conclude that Swithland slate was not used as *tesserae* in mosaic floors.

Other Uses

The only object of Roman date which has been suggested as having been made of Swithland slate is a whetstone found at Verulamium in deposits dated to A.D. 150-5/160 (Frere, 1972, 156). The geological identification was carried out by two members of the Institute of Geological Sciences, London, who concluded that the object was '. . . a block of slate . . . . . similar to type found in Charnwood Forest area of Leicestershire'. The block measured 261 mm by 151 mm by *c.* 34 mm. With the full cooperation of Verulamium Museum this object was brought to Leicestershire Museums where it was 'superficially' examined by John Martin. A comparison with all the Charnwood Forest rock types in the Museum's collections indicated that the 'whetstone' did not resemble any of the specimens. It therefore looks as though the whetstone was not made from Swithland slate as the excavation report indicates although John Martin concluded his report by saying that 'thin sectioning might prove me quite wrong'!

The so-called 'Roman sepulchral chamber' found at Mountsorrel in 1881 had a 'floor of rough Swithland slates' (VCH I, 215), but these were unshaped and had not been specifically prepared for use as a flooring material and so it looks as though handy slates had been utilized for this purpose. No other use of Swithland slate have been noted.

DISTRIBUTION (Fig 2)

The distribution of goods in the heavy sector of the Romano-British economy should not be compared with those in the light sector in which the manufacturer had to find ways of splitting up large consignments of products so that they reached the customer in ones or twos. This could be done in a number of ways including the use of middlemen who supplied shops and markets. Such traders are known from inscriptions such as those found at Colijnsplaat and Domburg, Holland, including one, for example, who traded in fine pottery or pottery figurines, *Negotiatores cretarii Britanniciani.* However, in the heavy sector of the economy goods were required in bulk and consignments are likely to have travelled directly from the production site to the place where they were to be used. This could be done using rivers, roads, or a combination of both and because of the heavy nature of the goods it has often been stated that they did not travel far from their source. This in general terms may be so, but when no suitable material existed locally even heavy goods could be transported quite long distances.

As there are no rivers which flow close by the deposits of Swithland slate where boats could have been loaded directly from the quarry, carts must have been used initially to move the slate, and once loaded it would seem to be uneconomic to then later transfer the slate to boat in order to use river transport. Many of the find spots of the slate are similarly well away from rivers and so again carts would have been necessary for the final journey of the slate if one postulates river transport. With such heavy material as roofing slate it seems most unlikely that this loading and unloading process would have been economic or efficient and so one must conclude that slate was transported from the Charnwood area by road.

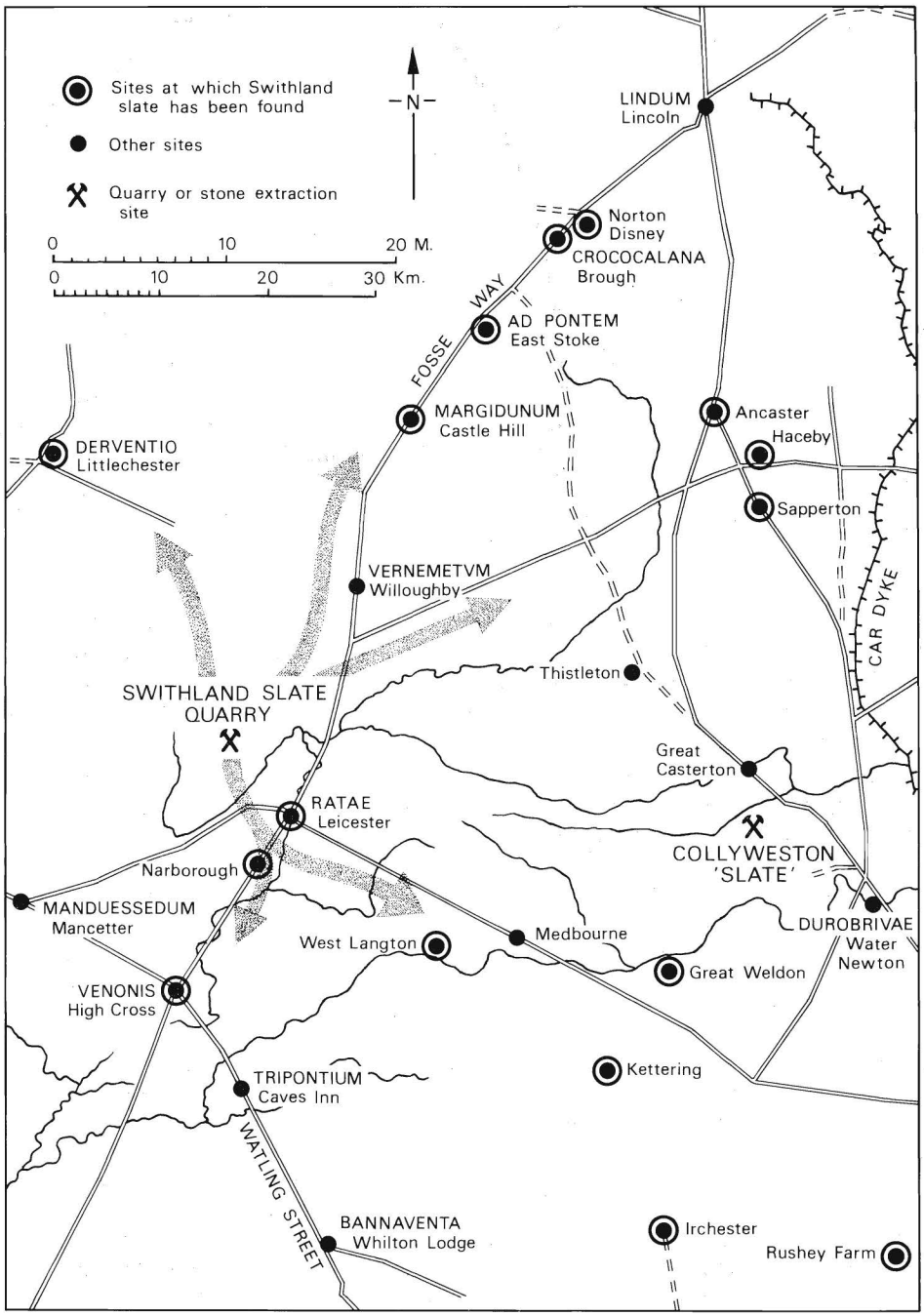

Figure 2: *Distribution of Swithland slate*

The recent upsurge in archaeological fieldwork in Leicestershire has resulted in many more settlements being identified including a number producing Roman building materials in which Swithland slate has featured and which can be assumed to be of Roman date. For the purposes of this paper it has not been thought necessary to list all those sites from within the county that have produced evidence of Roman slate; suffice it to say that Swithland slate has been found over most of the county. For the present its distribution further afield is of more interest.

A number of the sites in the east Midlands where Swithland slate has been found are close to the known main arterial road system. These sites include *Margidunum,* East Stoke (or Thorpe) and Brough on the Fosse Way north of Leicester, and the villas at Epperstone and Norton Disney either side, but within striking distance, of the Fosse Way. It is conceivable that the river Trent could have been used for part of the journey in order to reach these sites, but this would still entail an initial road journey of 3-4 miles between the quarries and the river Soar. The settlements at Ancaster, Haceby, Sapperton and Stonesby could have been reached by road using the road which branches off the Fosse Way at Six Hills (Margary Road No 58a). There is no river which could have been conveniently used in this case.

The Gartree road which links Leicester with Colchester would have been the route by which slate was transported to the south-east of the county and beyond. It has been found at quite a number of rural settlements in this part of the county and at Irchester and Great Weldon over the county border and possibly at the villa of Great Stoughton (also known as Rushy Farm), Cambs, in which case this would be the furthest settlement from the quarry on which it has been found, some 50 miles.

In the south-west of Leicestershire slate has been found on number of settlements including High Cross at the junction of Fosse Way with Watling Street (Pickering, 1934, 53). However, it has not been noted at Caves Inn *(Tripontium)* or at Whilton Lodge *(Bannaventa)* both on Watling Street south of High Cross (Per com from Jack Lucas). Likewise no such slate has yet been recorded at Mancetter *(Manduessedum)* to the north of High Cross, a settlement linked directly to Leicester by a road which passes reasonably close by the Charnwood area (per. com. Christine Mahany).

To the north-west of Charnwood slate has been found at Littlechester, Derby, during the excavations carried out by C.J.S. Green in 1971/2. A colonnaded building of third-to-fourth-century date which stood in the *vicus* to the east of the fort was roofed in part with Swithland slate (per. com. C.J.S. Green and *Britannia* IV (1973), 285).

DISCUSSION

It is often difficult to determine the extent of the distribution of some building materials because of the problems in relating a stone to a particular quarry. However, in the case of Swithland slate there is only one small discrete area of Leicestershire from which the slate could have been quarried and so it is possible to state precisely the distances it travelled in order to be used in building. The furthest settlement on which it has been found is the villa at Norton Disney a direct distance of 40 miles, or if the Great Stoughton example can be substantiated, a distance of 50 miles. Irchester is 32 miles away and Littlechester 25 miles. Although as mentioned earlier, a detailed list of sites on which Swithland slate has been found in Leicestershire has not been included in this paper, it has turned up on a sufficient number of sites to indicate widespread use within a 15-20 mile radius of the quarries. Outside that immediate area slate appears to have been used on sites conveniently near to the main road system. It is interesting to note that although sites north of Leicester on the Fosse Way used Swithland slate it has not, as yet, been recognised at Lincoln.

TABLE 1

DIMENSIONS OF A SELECTION OF ROMAN SWITHLAND SLATES

The following list is taken from details provided by Mr H.B. Sharp and from personal observations of slates over a number of years. At the time the weights of individual slates were not noted nor their thickness.

Site		*Height*	*Width*	*Skirt*
Drayton (Leics.)	1.	11	9½	4
	2.	8	7	3
	3.	8½	8½	3½
Haceby (Lincs.)	1.	8½	6¾	4¼
	2.	7¾	6¼	3½
	3.	7	6½	3½
	4.	7	6¼	3½
	5.	8	7	3½
	6.	7	7¼	3½
	7.	7¾	6¾	3½
Kettering (N'ton)	1.	7¼	7¼	4
	2.	7¾	7½	3¾
	3.	9½	8¼	4½
Littlechester (Derbys.)	1.	11	9	4
	2.	7½	7	3¾
Weldon, Great (Northants)		8⅜	6¼	4¼
West Langton (Leics.)	1.	11¼	10	6
	2.	10¼	10½	5¾
	3.	9	8½	5
	4.	9½	9	5½

Notes

The slates from Drayton are in the Jewry Wall Museum.

The Haceby slates are in Lincoln Museum.

The provenance of the Kettering slate is uncertain and Mr Sharp thought it might have come from Great Weldon.

Measurements of the Littlechester slates are taken from drawings supplied by C.J. Green.

Details of the West Langton slates from H.B. Aggas.

TABLE 2

DETAILS OF A SELECTION OF SLATES FROM THE NARBOROUGH EXCAVATIONS

The following slates are housed with the Leicestershire Museums Service and are catalogued under Accession Number A20 1983. They all come from the excavation of a Roman building at Narborough and from context 11. Measurements are in inches and weight in pounds in order to make comparison with recent accounts of slate easier.

	Height	*Width*	*Max. Thickness*	*Skirt*	*Weight*
1.	11¼	9	1	4½	3.64
2.	9½	8	1¼	4	3.13
3.	11¼	9	1¼	3½	4.41
4.	12	8¾	1⅛	4½	4.19
5.	9	7½	⅞	4	2.20
6.	11½	9	⅞	4½	2.98
7.	9¾	7¾	1	3½	2.31
8.	11	9¼	1⅜	4½	4.52
9.	11½	11	1½	4½	6.28
10.	8½	7¾	1⅛	3½	2.31
11.	8½	6½	1	3?	1.76+
12.	9	7¾	1⅛	3¼	2.20+
13.	10	8¾	1⅛	4	3.20
14.	8¾	7	1⅛	3	1.98

The + indicates that slates numbered 11 and 12 above were not complete, but had small pieces missing.

Acknowledgements

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