

RESEARCH IN PROGRESS

ALABASTER UPDATE

by

R.J. Firman

Summary

This research report summarises the progress of studies of English alabaster since 1984 the main result of which has been the re-discovery of a major seventeenth industry in Somerset which supplied alabaster to much of South West England.

Introduction

In 1984 the writer (Firman, 1984) published a review of the geological occurrence, geographical distribution and historical use of English alabaster. This stimulated further research notably at Chellaston (Firman and Young, 1986; Firman, 1989) and in South West England. The purpose of this research report is to summarise progress to date and indicate ways in which interested readers might assist.

Origin

Little can be added to the original discussion of the genesis of alabaster but the reader's attention is drawn to the subsequent correspondence (Holliday, 1984; Firman, 1984b) which emphasised that periglacial conditions were not a necessary pre-requisite for the formation of alabastrine textures. Both writers did, however, favour interglacial periods as being the most likely time of alabaster formation.

Documented sources

Further reference to 'alabaster' in the literature continue to be found but as explained previously (Firman, 1984a, p. 163) the word 'alabaster' has been frequently used ambiguously, often as a synonym for plaster grade gypsum. Three more examples, one probable, one possible and one highly improbable were cited by Cheetham (1984). The first is Beaumanor Park, Leicestershire which was attributed to Harrison (1577) by Richardson (1853) but was in fact described earlier in much the same words by Leland (c. 1543) as "a faire quarre of alabaster stone about 4 [or 5] miles from Leicester, and [not] very far from Beaumanour" [cf. "neere to Beau Manor which is foure or five miles from Leicester and taken to be the best" (Harrison, 1577, p. 115)]. Beaumanor is actually about eight statute miles from Leicester and the park is on non-gypsiferous land. It is, however, within sight (3 miles) of the gypsum outcrop east of the river Soar (Firman 1984, Fig. 2) and for this reason it was tentatively suggested (Firman, 1984, p. 169) that Leland (*op. cit.*) was referring to the alabaster workings at Burton-on-the-Wolds which were later well documented by Burton (1622). The outcrop extends southward towards Leicester and it is equally possible that Leland (c. 1543) was referring to other workings on this outcrop nearer to Leicester and to Beaumanor (eg. Barrow-on-Soar). There is, therefore, no doubt that alabaster was produced in Leicestershire during the sixteenth century but more research is needed to establish the precise locality.

Mercian Geologist, vol. 12, no. 1,
1989, pp. 63–70.

Cheetham's second example (*op. cit.*) is derived from Nelson (1918) who claimed that alabaster "is found in beds in Staffordshire and Derbyshire in the neighbourhood of Tutbury and Chellaston, whilst lesser deposits occur elsewhere in England, as at Buttercrambe, near York". Certainly gypsum was formerly worked for plaster near Scrayingham, 2 miles north of Buttercrambe (Smith, 1974) but there is no evidence that any of this was of alabaster quality. The Geological Survey 6 inch map records only thin fibrous gypsum near Buttercrambe. Given that both this and the outcrops at Scrayingham are stratigraphically equivalent to the Newark gypsum beds and that boreholes prove these to thin northward into Lincolnshire and Yorkshire, it seems most unlikely that gypsum thick enough to produce workable alabaster would occur at Buttercrambe. Without further evidence, therefore, this is best regarded as yet another example of the word 'alabaster' being used as a synonym for plaster grade gypsum.

Cheetham's third example (*op. cit.*) is geologically bizarre, yet the idea of alabaster at St David's appears to have been unchallenged for more than 400 years. Cheetham cites Richardson (1853) who quotes William Harrison (1577). Close reading of Harrison's text shows it to be a compilation garnered from a variety of sources and informants. He seems to have been misinformed in this instance since no rocks of the appropriate age and lithology which might conceivably contain gypsum outcrop within 60 miles of St. David's. The only remote possibility would be a faulted outlier or faulted coastal exposure now removed by erosion. A far more likely explanation is that Harrison, or his informant, like many before and since, mistook quartz for gypsum. The writer well remembers being asked to investigate the possibility of gypsum in Cornwall because of the reported large blocks of gypsum (which were of course vein quartz) in the walls of Restormel Castle!

No doubt there were places other than those listed in Firman (1984) which produced small amounts of alabaster but they are unlikely to have included Buttercrambe in Yorkshire and certainly not St. David's in South Wales.

The church monuments data base

Because of its solubility alabaster in this country can only be used successfully as an ornamental stone if it is protected from the weather. Examples are therefore to be found principally *inside* churches, historic buildings and in museum collections. Much alabaster was destroyed during the Reformation and during subsequent church restorations, particularly in Victorian times. Of that which survives by far the most voluminous, numerous and arguably the most complete are church monuments. In an attempt to depict the growth of the English alabaster industry from the early fourteenth to the eighteenth century these were plotted on maps (Figs. 3 and 4 in Firman, 1984). Deductions which can be drawn from these are constrained by the accuracy and completeness of the data base which in this case was based on information contained in the 'Buildings in England' series by Pevsner and his co-workers.

This source has proved to be reasonably complete for pre-Reformation tombs probably because Pevsner was acutely aware of Gardner's (1940) list and indeed sought to add to it. His additions do, however, need to be checked. For example at Bedale, Yorkshire, Pevsner claimed that the effigy of Sir Brian Fitzlan was an example of early fourteenth century craftsmanship and as such was "one of the earliest alabaster monuments in existence". Unfortunately it and a similarly early effigy at Alne are carved from Magnesian Limestone, facts unknown to the writer before he examined them in 1986 and 1989 respectively. Fig. 3 (in Firman 1984) therefore needs to be amended accordingly, but otherwise it appears to be a reasonable representation of the distribution of alabaster monuments from 1300–1580. Possibly field work will reveal a few more not recorded by Pevsner but it seems that the data base for this period is more or less complete.

Unfortunately the same cannot be claimed for later monuments. Possibly the incompleteness of the data in Pevsner's 'Buildings in England' for late sixteenth and early seventeenth century alabaster was not sufficiently emphasised, although a comparison of Figs. 5A and 5B (in Firman, 1984) should have illuminated the sad fact that lists based solely on information from Pevsner are likely to record less than half the total number of alabasters in our churches. The main problem is that although Pevsner and his co-workers usually described all notable monuments they often did not identify or misidentified the material from which they were made. In fairness it should be added that Pevsner never set out to provide a complete inventory or to record building and decorative stones, but merely noted those which, in his opinion, were of aesthetic or historical significance.

A more complete inventory exists for a few countries and towns in the Royal Commission for Historical Monuments and in some county publications notably for Derbyshire (Cox, 1875–9), Leicestershire (Nichols, 1795) and Surrey (Manning and Bray, 1804–1814) where the authors seem to have been punctillious in identifying the ornamental stones in the tombs they describe. For most of the country, however, Pevsner's 'Buildings in England' seem to be the only convenient, though incomplete, sources. Since 1984, however, field work particularly in Somerset and North Devon, has enlarged the data base and Fig. 1 shows the current situation. This

illustrates that for much of the country there is still insufficient information to add detail to my 1984 generalisation that post Reformation trade in alabaster tombs was widespread, rapidly expanded after 1580 and equally rapid declined after about 1640 (Firman, 1984, Figs. 4 & 5). In particular until the data base is reasonably complete little can be deduced about the relative importance of workshops which supposedly existed in York, Norwich, Lincoln etc. in the Middle Ages (Cheetham, 1962) and may have continued to a later date. In the absence of reliable published data the only way of establishing the true number of post-Reformation alabaster tombs is to visit all churches known to contain tombs of the appropriate date (c. 1540–1700). A truly formidable task for which help would be much appreciated.

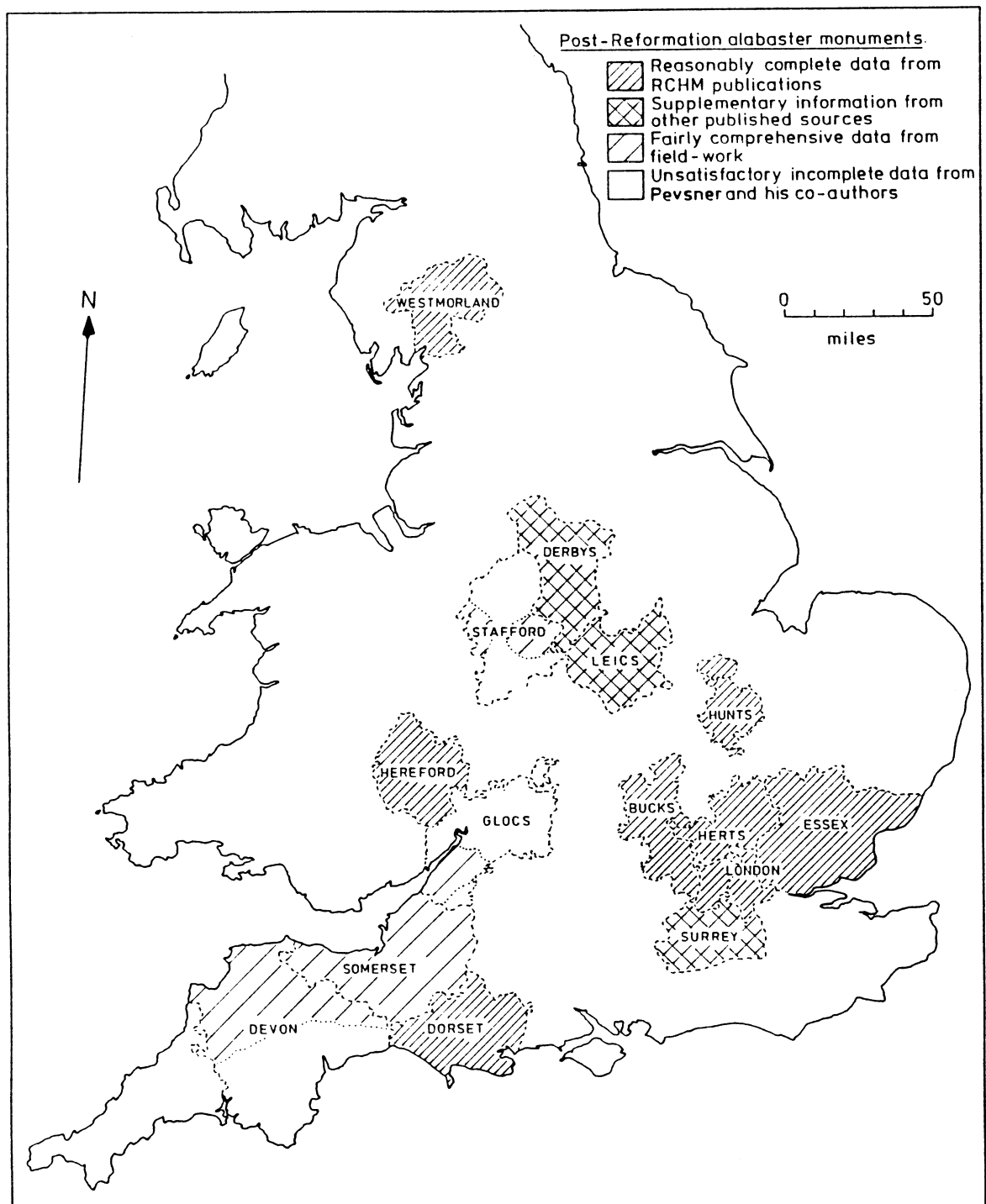


Fig. 1. Map showing the reliability of the data base for post-Reformation pre-Victorian alabaster monuments, particularly for those after 1580.

Provenance

With the sole exception of the small fifteenth century effigy at Sheriff Hutton (Routh and Knowles, 1981) thought to have been carved from porphyroblastic, Yorkshire, Permian alabaster (Firman, 1984) all monuments examined up to 1984 had structures and textures consistent with alabaster from Triassic strata. Documentary evidence pointed to Chellaston, Derbyshire and the Castle Hayes-Fauld area of Staffordshire as being the principal suppliers, possibly supplemented later by material from Burton-on-the-Wolds, Leicestershire (Burton, 1622) and Red Hill, Nottinghamshire (Throsby, 1795). Distribution maps, based solely on data from Pevsner, did not indicate any anomalous concentrations around other known sources of alabaster such as the Somerset coast (Gerard, 1633) and Ledsham, Yorkshire (Vertue, 1742). Moreover, preliminary field work on the Somerset coast showed that, although there was gypsum of alabaster quality exposed, none seemed large enough for anything other than small panels or modest monuments. Similarly in the Ledsham area, Vertue (1742) suggested a maximum of 2 tons for the alabaster mined thereabouts, much smaller than blocks obtained from Chellaston and Fauld. On the basis of the evidence then available it was suggested that only relatively small pieces of alabaster in minor quantities were produced from the fifteenth century onwards from the Yorkshire Permian and in the seventeenth century from the Somerset Trias. Subsequent field work did, however, reveal unexpected differences in texture and structure, as well as anticipated colour differences (Firman, 1984, p. 175) which allowed alabaster from SW England to be confidently distinguished from East Midlands varieties. Nothing, however, prepared the writer for the 50 or so seventeenth century tombs, mostly made wholly of Somerset alabaster, ranging from many very large with life size effigies to small tablets, which have so far been discovered since 1984 in SW England (Figs. 2A and 2B). Yorkshire has yet to be explored!

The establishment of visual diagnostic criteria for recognising Somerset alabaster proved not to be as difficult as anticipated. The geological setting of North Somerset gypsum differs from that in the East Midlands principally in the variety of its host sediments and its involvement in Hercynian tectonics. This has resulted in a greater variety of colours, textures and structures including easily recognisable features not seen in East Midlands alabaster, the most important of which are:

- (a) *Colour*. Ivory, yellow, brown, grey and almost black varieties all unknown in the Midlands occur as well as the colourless and orange or red varieties typical of the East Midlands.
- (b) Prominent easily visible (c. 5–15 mm diam.) *porphyroblastic aggregates* of darker well crystalline gypsum which impart a spotty or blotchy appearance to much Somerset alabaster, superimposed on the usual range of nodular, mosaic to wispy structures (Holiday, 1971, p. 310) which typify East Midlands and many other gypsum deposits.
- (c) *Gneissose textures* which are particularly frequent in alabaster from gypsum intruded into faults in Somerset but not recorded in the East Midlands.
- (d) *Distortions due to tectonic deformation* including minor folds, stretched nodules etc., common in Somerset alabaster and very rare in the East Midlands.

This great variety was long ago appreciated by Gerard (1633) who wrote of Somerset alabaster that “but for a variety of mixtures and colours it passeth any I dare say in the kingdom if not others, for here shall you have some pure white others white spotted with redd, white spotted with black, redd spotted with black, redd spotted with white and a perfect black spotted with white”. Paradoxically the biggest problem appears to have been, not that of distinguishing East Midlands alabaster from its Somerset counterparts (although some varieties do have similar structures and textures) but in identifying the latter as alabaster in the first place. More often than not Somerset alabaster monuments are described in church guides and supposedly authoritative texts, such as Pevsner, as being made of various coloured marbles. Once identified as alabaster one or more of the diagnostic features can usually be recognised provided the monument is not in too dark a corner of the church, or too heavily coated with dirty beeswax though even in these circumstances the fondness of local sculptors for using a variety of different alabasters, sometimes combined with plaster, is usually sufficient to identify a Somerset source. However, it is essential to be familiar with the range of colours, textures and structures exhibited by both East Midlands and Somerset alabasters the latter being easily checked by detailed examination of cliff sections east of Blue Anchor and the former by inspection of the many examples in churches and stately homes where there is proof of an East Midlands provenance.

Ironically, therefore, where sophisticated analytical techniques (Wardley, 1976; Beasley, 1978) have failed (see Cheetham, 1984 for a fuller discussion) traditional geological 'look and see' methods have provided unambiguous indications of Somerset provenance. This alabaster almost certainly, but not necessarily, came from Warren Point between Watchet and Blue Anchor. The possibility that some alabaster might have come from other localities in Somerset, such as Somerton, or even from Penarth in South Wales needs to be considered since gypsum from these localities shares some of the characteristics of that exposed on the north Somerset coast. There are, however, no records known to the writer of alabaster having been obtained from these localities other than the early twentieth century 'alabaster tiles' from Penarth (Sherlock and Smith, 1915).

In spite of Gerard's comment (1633) about "excellent alabaster, which they use *much* (my italics) for tombs and chimney pieces" the scale and in many instances the existence of this seventeenth century Somerset industry seems to have been virtually forgotten, so much so that in a recent paper L.S.C. and F.S.W. (Anon, undated) could write that alabaster, "is well known at Watchet, Som. but not in sufficient quantities for monumental work"! Admittedly Gerard wrote of mines at Minehead and it could be argued that he would hardly have mistaken Watchet for Minehead as suggested by Vellacott (1912) and Firman (1984a). Study of old maps suggests a more plausible explanation namely that Gerard confused Warren Point, between Watchet and Blue Anchor, with Warren House on the coast near Minehead. The comparative lack of large thick masses of alabaster in the present day cliff exposures is perhaps best explained by coastal erosion and this may also explain why this alabaster was apparently not discovered until the early seventeenth century.

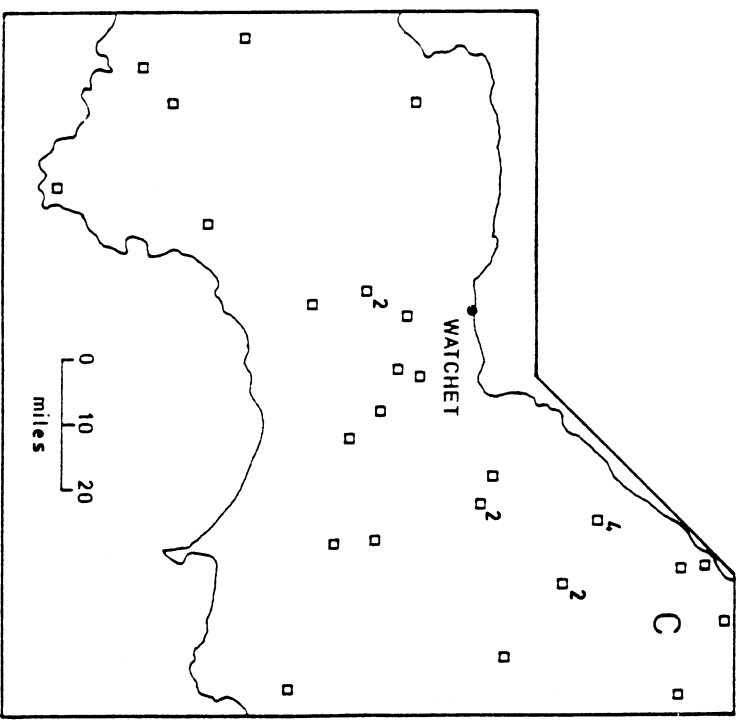
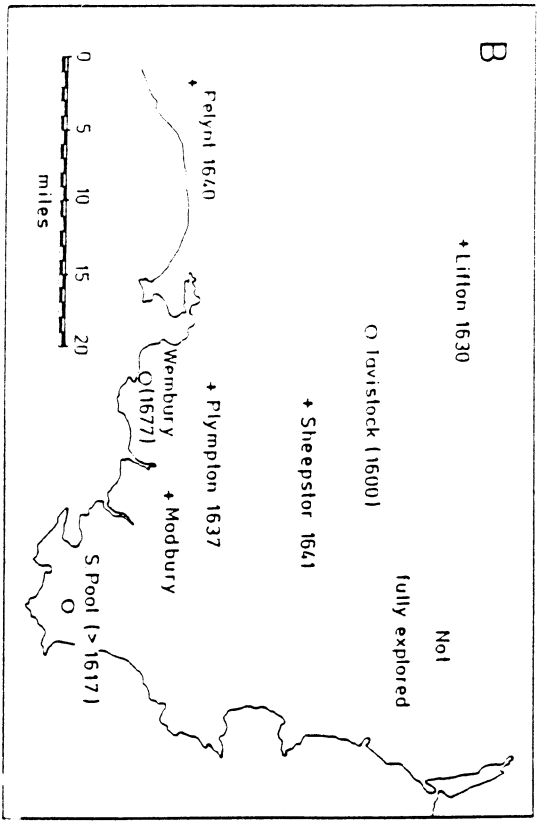
A considered evaluation of the importance of the Somerset alabaster industry must await the completion of field work which involves the inspection of every late sixteenth to early eighteenth century tomb which could conceivably be made of alabaster in SW England and possibly also South Wales and Ireland—a task for which offers of help would be most welcome. Figs. 2A and 2B are, thus, interim statements but already it is apparent that almost 70% of the seventeenth century alabasters in the area surveyed are made from Somerset material. Moreover, there are more Somerset alabaster monuments in Devon than in Somerset the concentration in and around Barnstaple and stylistic considerations (Esdaile, 1946, p. 123) suggesting that local craftsman imported the raw material rather than finished carvings. Some writers have attributed specific alabasters to local material (e.g. Cothelstone, Anon, 1937; North Molton, Anon, 1947) but not always correctly (e.g. Pevsner's footnote about Dunster) and at least one piece of supporting contemporary evidence has been found for a font made at Watchet (Armstrong 1982) but it appears that no one has hitherto appreciated the scale or attempted a comprehensive study of Somerset alabaster.

Conclusions

Since 1984, when the writer published his review, field work has confirmed that data for post-Reformation and particularly seventeenth century alabaster monuments is woefully incomplete; a fact perhaps not sufficiently emphasised in the original paper. Field work has been concentrated in SW England where the recognition of diagnostic characteristics has allowed the identification of locally produced alabaster. Already more than fifty such monuments have been identified representing almost 70% of seventeenth century monuments in SW England. Nationally this is probably less than 5% of the estimated total production but nevertheless it demonstrates that the East Midlands did not have an absolute monopoly. Further research may yet locate more Somerset alabasters and the extent of the Yorkshire industry (Vertue, 1742 and Firman, 1984a) has yet to be determined. Increasingly it is becoming evident that it will not be possible to complete the necessary field work in a reasonable time and consequently the author would welcome information on alabasters not noted by Pevsner and his co-authors and sources of information other than those mentioned in this report.

Acknowledgements

The author is indebted to Jean Pearson for producing admirable typescripts from all but illegible manuscripts and to Josie Wilkinson for producing such clear diagrams from scrappy sketches. I am most grateful to John Young for critically reading an early draft of this paper.



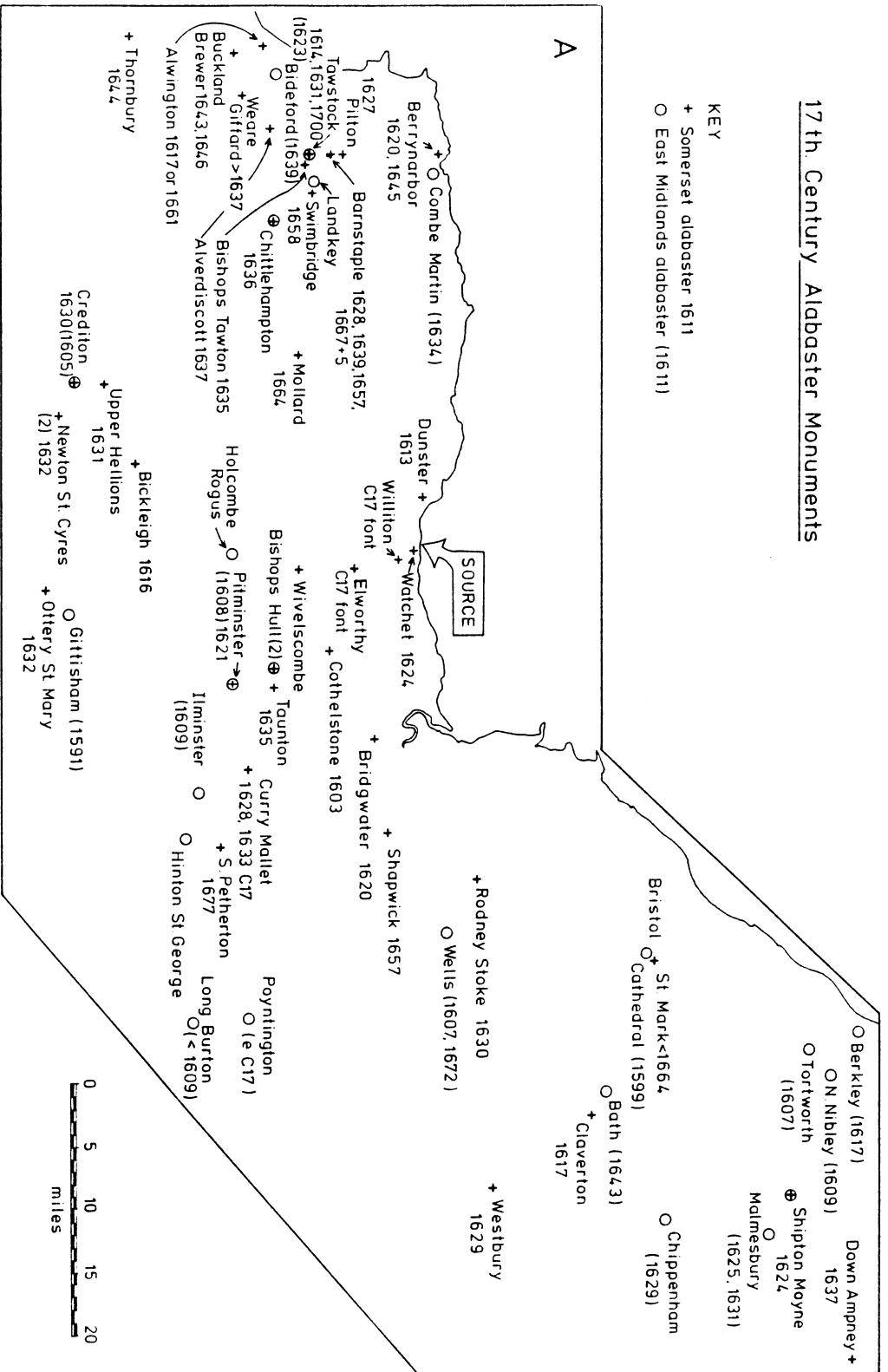
Figs. 2A and 2B. Provisional maps showing the distribution of alabaster monuments in SW England. Field work for Fig. 2A is thought to be about 90% complete although there were a few local churches where the writer was unable to obtain a key notable among them being North Molton (Devon) which does have an alabaster monument, Nynehad, Wellington and several churches in Bristol which have monuments of the appropriate date but not necessarily alabaster.

Field work for Fig. 2B is less complete, in particular the Exeter area remains to be explored. Note also that, except where Pevsner gives specific information about the date of erection, it is the date of the death of the principal person commemorated that is given on these maps. The monument may have been constructed several years before or after that person's death.

Fig. 2C. Alabaster monuments (1580-1700) noted by Pevsner in the area of SW England covered by Figs. 2A and 2B (modified from Firman, 1984).

17th. Century Alabaster Monuments

- KEY
- + Somerset alabaster 1611
 - East Midlands alabaster (1611)



References

- Anon, 1937 (Field Report). *Proc. Somerset Arch. Nat. Hist. Soc.* 83, 58.
- Anon, 1947 (Field Report). *Proc. Somerset Arch. Nat. Hist. Soc.* 93, 9.
- Anon. Undated. *The stones of Wells cathedral* (2nd ed.) Wells Nat. Hist. Archaeol. Soc., 6pp.
- Armstrong, H., 1982. *The parish of St. Peter Williton*. Langley Print, Taunton.
- Beasley, S.M., 1978. *The attribution of alabaster tomb carvings to medieval schools, analytical and typographical problems*. University of Bradford, unpublished post-graduate thesis.
- Burton, W., 1622. *The description of Leicestershire, containing matters of antiquity, history, armoury, genealogy*. London.
- Cheetham, F.W., 1962. *Medieval English alabaster carvings in the Castle Museum, Nottingham* (Revised ed. 1973), 62pp.
- Cheetham, F.W., 1984. *English medieval alabasters, with a catalogue of the collection in the Victoria and Albert Museum*. Oxford.
- Cox, J.C., 1875–79. *Notes on the churches of Derbyshire*. 4 vols.
- Esdale, K.A., 1946. *English church monuments 1510–1840*. Batsford, London, 114pp.
- Firman, R.J., 1984a. A geological approach to the History of English alabaster. *Mercian Geol.* 9, 161–178.
- Firman, R.J., 1984b. Origin of alabastrine gypsum. *Mercian Geol.* 9, 253.
- Firman, R.J., 1989. A tale of two excursions: geological, historical and environmental aspects of gypsum in Derbyshire and Staffordshire. This issue *Mercian Geol.* 12, 49–55.
- Firman, R.J. and Young, J.A., 1986. A reassessment of the Chellaston gypsum plaster industry. *Derbys. Misc.*, 11, 40–47.
- Gardner, A., 1940. *Alabaster tombs of the pre-Reformation period*. Cambridge.
- Gerard, 1633. *Particular description of Somerset* (1633) reprinted in Somerset Rec. Soc. XV (1900), 12.
- Harrison, W., 1577. Description of Britaine. In the lengthy preface the *History of England* by R. Holinshed.
- Holliday, D.Q.W., 1971. Origin of Lower Eocene gypsum—anhydrite rocks, southeast St. Andrew, Jamaica. *Trans. Instn. Min. Metall.* 80, B305–315.
- Holliday, D.W., 1984. Origin of alabastrine gypsum *Mercian Geol.* 9, 252.
- Manning, O. & Bray, W., 1804–1814. *The history and antiquities of the county of Surrey* (by Owen Manning) continued to the present day by W. Bray (3 vols).
- Nelson, P., 1918. The Byland Trinity preserved at Byland Abbey. *Ampleforth J.* 23, 99–102.
- Nichols, J., 1795. *The history and antiquities of the country of Leicester*, 4 vols, London.
- Pevsner, N. & Co-authors, 1951–74 and later editions. *Buildings of England*. County Series, Penguin.
- Richardson, E., 1853. Notices of medieval sculpture and workings in alabaster in England. *Archaeol. J.* X, 116–23.
- Routh, P. & Knowles, R., 1981. *The Sheriff Hutton alabaster: a re-assessment*. Rosalba Press, Wakefield.
- Royal Commission on Historic Monuments. *Inventories of historical monuments in the following counties: Buckingham 1912–12; Dorset 8 vols. 1931–34; Hertfordshire 1910; Huntingdonshire 1926; Middlesex 1937; Westmorland 1936 and the cities of Cambridge 2 vols. 1959, London 5 vols. 1924–30 and Oxford 1939.*
- Sherlock, R.L. and Smith, B., 1915. *Gypsum and anhydrite*. 1st Edit. Mem. Geol. Surv. Special Report on the Mineral Resources of G.B. pp. 1–40.
- Smith, D.B., 1974. Evaporites pp. 237–239. In *The Geology and mineral resources of Yorkshire*, D.H. Rayner and J.E. Hemingway (eds). Yorks. Geol. Soc.
- Throsby, J., 1795. *History and antiquity of the town and county of Nottingham*.
- Vellacott, C.H., 1912. Quarrying in *The Victoria History of the county of Somerset*, vol. 2, p. 380.
- Vertue, G., 1742. B.M. Add Mss. 23073, 146 reprinted in *Walpole Soc.* 26, (1938), p. 18.
- Wardley, K., 1976. *Alabaster sources—The attribution of carvings to medieval schools of alabaster working by trace element determination; a pilot feasibility study*. University of Bradford unpublished post-graduate study.

Present address:
Classics Department (Archaeology Section)
University Park,
Nottingham, NG7 2RD.

R.J. Firman,
Department of Geology,
University Park,
Nottingham, NG7 2RD.