

Church of St Bartholomew, Cadeleigh, Devon
Diocese of Exeter

Monument to the Leach Family (1660)

Polychromy investigation, September 2008



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Contents

1.	SUMMARY	2
2.	BRIEF	3
3.	DESCRIPTION AND HISTORY OF THE BUILDING	3
4.	DESCRIPTION, HISTORY AND SIGNIFICANCE OF THE OBJECT	3
5.	CONDITION ASSESSMENT	7
6.	CAUSES OF DETERIORATION AND THEIR TREATMENT	8
7.	RECOMMENDATIONS FOR CONSERVATION	13
8.	FUTURE RECOMMENDATIONS	15
9.	ESTIMATE	16
10.	SOURCES	18
11.1	APPENDIX 1: CATHERINE HASSALL PAINT ANALYSIS REPORT	19
11.2	APPENDIX 2: LOCATION OF PAINT SAMPLES	36
11.3	APPENDIX 3: LOCATION OF CLEANING/CONSOLIDATION TESTS	37
11.4	APPENDIX 4: PREVIOUS DOCUMENTATION	40
	11.4.1 James Davidson	40
	11.4.2 Beatrix F. Cresswell	43
	11.4.3 John Stabb	47
	11.4.4 Invoice for building work 1903	52
	11.4.5 Kneeling Simon Leach. Wells Conservation Ltd, 1994 Report.	54
11.5	APPENDIX 5: OTHER DEVON MONUMENTS	55
	11.5.1 The Bouchier Monument, Tawstock, Devon	55
	11.5.2 Monument to Sir Francis Chichester, Bishop's Tawton	55
	11.5.3 The Carewe-Pole Monument, Colyton, Devon	56
12.	ILLUSTRATIONS	57

1. Summary

This report on the polychromy of the 17th century Leach monument was commissioned by the parish, at the request of the Council for the Care of Churches.

Our brief was to investigate the condition of the polychromy elements, and to study the effects of the over-paint on the original paint layers following the submission of a report on the stonework by Sue and Lawrence Kelland, dated January 22nd 2007. The polychrome investigation was carried out by Eddie Sinclair and Madeleine Katkov on 18th and 19th March 2008. Scientific analysis was carried out by Catherine Hassall.

The monument sited in the northeast corner of the church (Photos 1 and 2), commemorates several generations of the Leach family and dates from 1660, although the recumbent effigies are of an earlier date. The monument is carved in Beer stone, which is painted throughout and set against Ashburton marble of various colours. An inscription on the north wall records that the monument was restored 'by public subscription' in 1903. This restoration involved extensive repainting.

In recent years the church has been well maintained and the PCC, recognising that the monument was in need of expert attention, has commissioned three reports since 1974, but no work has been carried out. The painted decoration is now in particular need of attention; relatively cheap materials were used in the 1903 refurbishment having resulted in a poorly bound and friable paint layer and a dusty ingrained surface.

Close examination, tests and paint analysis have revealed four phases of decoration, two of which are clearly visible. The simple palette of 1903 overpaint can be seen alongside the original, more richly painted decoration of 1660. This latter with its naturalistic painted figures set against a silver-gilt and blue framework, survives extensively. Analysis indicates that the earlier effigies retain traces of even earlier colour, whilst there is evidence of a repaint, carried out between the 1660 and the 1903 redecoration, on the lower elements.

In some areas where the adhesion is particularly poor, the overpaint is peeling and exposing the earlier paint. In other places the detachment of the top paint scheme has caused a total loss of polychromy leaving the bare stone exposed. Whilst some areas of detaching paint are obvious, others only become apparent when the surface is handled, as it may be intact. An estimated 50% of paint is loose.

The materials used in the 1903 restoration were not of the best quality and they are now over one hundred years old and failing. The inspection and analysis indicate that it is this that needs addressing; natural aging rather than aggravating circumstances.

The build-up of dirt and the tarnishing of the silver have resulted in a reversal of the tonality of the polychromy; what should be the brightest areas now read as dark. Whilst the alteration of the silver cannot be addressed, cleaning tests have revealed that much of the dirt is removable and the figures, which are particularly dirty, should clean up well.

The Leach monument is unusual in the extent and excellent condition of its original decoration, and the importance of the monument makes this a particularly valuable survival.

2. Brief

This report on the polychromy of the Leach monument was commissioned by the parish, at the request of the Council for the Care of Churches, following the submission of a report on the stonework by Sue and Lawrence Kelland, dated January 22nd 2007¹.

We were asked to investigate the condition of the polychromy elements, and to study the effects of the over-paint on the original paint layers. We were concerned specifically with the surface decoration, overall responsibility for the structure remains with the Kellands. This report is therefore a supplement to, and should be read in conjunction with, the Kellands report. This has been referenced where appropriate, in order to avoid duplication and to keep clear the boundaries of responsibility.

The polychrome investigation was carried out by Eddie Sinclair and Madeleine Katkov on 18th and 19th March 2008.

The building is in the care of the Parochial Church Council.

The architect is John Alexander of Jonathan Rhind Architects, Barnstaple.

Scientific analysis was carried out by Catherine Hassall, London.

3. Description and History of the Building

3.1 St Bartholomew's Church, Cadeleigh, Devon.

3.2 For a full description of the building please see Kellands²

4. Description, History and Significance of the Object

4.1 This monument commemorates several generations of the Leach Family. A dedication to Sir Simon (d. 1637) and Lady Katherine Leach is written on an entablature in the window at the centre back. They are shown as recumbent figures. These effigies come from an earlier, undated, monument. The actual date of this monument is that of the two kneeling figures, Sir Simon Leach's grandson, also Simon, d.1660, and his wife, Bridget. Eight children, four female and four male, kneel below the table. The monument is dated by inscription to 1660. Another descendent, also Simon, d.1708, is commemorated on another inscription, on the east side of the north wall of the monument.

4.2 The monument stands in the northeast corner of the north aisle.
Dimensions: ht.5.5m; w.3.5m; d.1.23m.; ht. of table 1.190m
It is floor mounted against the north wall and frames the window.

4.3 For a general description of the structure please see Kellands³.

Substrate: Beer stone, painted throughout and Ashburton marble of various colours.

1 Kelland, S. and L., 'Church of St Bartholomew, Cadeleigh, Devon, Diocese of Exeter. Monuments to the Leach Family, late 1600's, John Wood, d. 1843 and Fortescue Lowman Junior, d. 1676. Conservation Reports and Proposals. January 22 2007'. Unpublished report for the Council for the Care of Churches.

2 Kellands, 2007 (3.2 & 3.3, p. 1 & 2)

3 Kellands 2007 (1.4.3. ii p3)

The earliest description that has been found so far is by James Davidson writing in c.1845?⁴ (Appendix 4.1).

As it stands today, the monument retains a remarkable amount of polychromy. There are two clearly visible paint schemes. The most recent layer has the appearance of a distemper and is flaking extensively. Beneath it can be seen an earlier decoration, probably oil-based. In some areas the build up of paint layers has clogged the carving, suggesting the presence of more than two schemes (Photograph 22).

The overpaint is more obvious on the lower, more accessible, areas of the monument. The figures have been painted all over, including their faces, in a dull green, possibly to imitate bronze (Photographs 6, 7, 10, 12). Other details, such as the cushions, are picked out in red and white (Photographs 17, 23, 24). The backgrounds of the ornamentation on the canopy are also repainted, in a green/blue (Photographs 5, 46).

In the earlier scheme the figures are painted naturalistically and this is visible where the later paint has been lost (Photographs 7, 15, 20 and 59). The capitals, relief carving on the pilasters, and free standing carving on the coffering, are silver-gilt, and the backgrounds are blue (Photograph 4, 35). On top of the canopy, the putti and statues are painted in off-white, presumably to imitate stone (Photograph 43), and the heraldic shields are polychromed (Photograph 30).

The paint surface is very dusty and there are many areas of flaking. The gold effect is achieved with a yellow glaze over silver leaf which in many places has tarnished (Photographs 31, 32, 34, 52). The whole has the appearance of neglect and decay. Pencilled graffiti on the east putto reclining on the pediment is dated 1909 (Photograph 45).

4.4 The uppermost decoration is associated with major repairs carried out to the monument in 1903 and recorded on a wall plaque to the west of the window. The church still retains the original itemised bill from Luscombe and Sons Ltd. for this work, carried out in August and September 1903, although unfortunately there is no reference to the repainting (Appendix 4.4)⁵.

The repainting is referred to in several 20th century documents.

Beatrice Cresswell compiled notes on Devon churches in the period between 1905-1919, (Appendix 4.2). She writes of the paint on the Leach monument⁶:

“When the monument was restored it was a great pity that the work was not superintended by someone with heraldic knowledge, for the armorial bearings have been shockingly treated. There are five oval escutcheons on the canopy and of these only the arms of Leach are correctly blazoned. The others have been painted either red or ermine, or worse! Red picked out on a background of pale art green. Harry Hems who did the work of the restoration, and regarded himself as an antiquarian, ought to have known better.

4 Davidson, J. ‘Church Notes: East of Devon’. Manuscript, handwritten 1840s. Westcountry Studies Library, Exeter.

5 It is useful in that it gives some idea of how extensive the work was at this date. The “shattered monument” was dismantled and rebuilt on new foundations and the north wall, where it was leaning out in this corner, was rebuilt and replastered.

6 B.F. Cresswell, ‘Notes on Devon Churches; the Fabric and Features of Interest in the Churches of the Deanery of Tiverton’, 1920. The original notes from which this was written were compiled between 1905-1919, with revisions and additions for the final manuscript. Westcountry Studies Library, Exeter.

The shields display:-

Ermine, on a chief indented gules, 3 ducal crowns or. Leach.

Argent, a lion rampant gules, crowned or. Turbeville.

Argent, a saltire between 4 cinquefoils gules. Napper.”

Cresswell includes a watercolour illustration of the shields described at the top of page 95 in her book (Appendix 4.2).

Black and white photographs taken by John Stabb show the monument at this period. The date appears on the backs as ‘?1900’⁷. Whilst it is hard to see the details in these photographs the paint appears to be extensive and intact (Appendix 4.3) and the photographs must therefore be slightly later than dated having been taken after the 1903 refurbishment. Appendix 4.3 also includes Stabb’s text on Cadeleigh, from volume 1 of his book as this provides a valuable record.

A brief report by Hugh Harrison of Herbert Read Ltd, describes the 1903 decoration and condition circa 1974⁸:

“Generally the monument is in good condition with little structural damage.....the vast majority of the work is going to be taken up with the redecoration of the monument. This was last carried out, as has been so carefully inscribed and gilded on the tomb, in the early part of this century. This recent work was thorough and of little merit. Gold paint was used instead of gold leaf and almost all parts of the tomb, including all the surfaces of the figures, except the cherubs having been painted a pale green. Odd sections have been picked out in bright red, some of these correct as for the pillow for Sir Simon, others incorrect, as for a section of the armour of the kneeling knight.”

Photographs taken at this time have not aged well and provide no helpful further evidence. No work was carried out as a result of this report.

A report, dated January 1994, compiled by Kate Anstead, Christina Kaye and Nick Durnan for Wells Conservation Ltd provides a useful reference point for the state of the monument in its recent past⁹. No work was carried out as a result of this report. A large number of photographs were taken at this time which are particularly useful, (see 5.1 below).

The physical history of the polychromy was clarified by the analysis carried out by Catherine Hassall (Appendix 1), which has confirmed the two major decorative schemes. The original painted decoration of 1660 survives extensively as does the repaint of 1903. Analysis confirms the existence of two further paint phases. In some of the samples from the lower section of the monument there is an intervening layer between the original scheme and the 1903 refurbishment, indicating that some limited retouching was carried out in the eighteenth or nineteenth centuries. Cross sections have also indicated that the recumbent effigies were painted before they were installed on this monument.

7 John Stabb, photographs taken for ‘Some Old Devon Churches: their rood screens, pulpits, fonts etc.’ 3 volumes, pub. Simpkin, Marshall, Hamilton, Kent and Co. London 1908. Photographs labelled ‘Cadeleigh: St Bartholomew’s Church: Leach Monument [Torquay]: [John Stabb]: [1900?]? Photograph: 160x120mm.’ Westcountry Studies Library References: Control numbers: E/C/2027: E/C/2023: E/C/2029: E/C/2032.

8 Harrison, H. ‘Report on Re-decoration and Repairs to Tomb of Sir Simon and Lady Katherine Leach, 1660’. Report for Herbert Read Ltd. housed in the Herbert Read Archive in the Devon Records Office. As yet uncatalogued. The report is undated but the accompanying estimate in the file is dated 22 January 1974.

9 Anstead, K.; Kaye, C. and Durnan, N. Wells Conservation Ltd. ‘Conservators Report’, 1994. Unpublished report for the Council for the Care of Churches.

4.5 The Leach monument retains an extraordinary amount of its original paint; it is unusual to see so much surviving. The quality is high and equal to the fine carving it adorns. It is not easy to discuss the significance of paint in isolation; it is an integral part of the object as colour was still a vital element of monuments of this period. It may be appropriate when assessing the significance of this survival to consider the common fate of this type of decoration. The paint on post-Reformation tombs has more often been repainted than conserved. Often this repainting does not follow the original colour scheme and modern paints are used. In other cases the paint is considered of no great value and allowed to deteriorate to an extent where much valuable historical evidence is lost.

Other notable important monuments of a similar period in Devon have received far more obvious and obtrusive repainting, for example the alabaster Bouchier monument of 1623 at Tawstock (Appendix 5.1). Elsewhere the paint on many 17th century monuments has been neglected. At Bishops Tawton for example, the Chichester monuments are especially obscured with dirt, though the monument to Sir Francis Chichester of 1698, displays features such as the caryatids that could still retain their original paint (Appendix 5.2). The paint on other elements, such as the heraldic devices and frieze is probably overpainted. The 1669 monument to John Chichester, closer in date to the Leach monument, appears to be largely painted with stone-coloured paint with gilded capitals and mouldings apart from the heraldic elements which have been overpainted.

More closely related to the Leach monument is the monument to the Carewe-Pole family in St Andrews Church, Colyton, Devon (Appendix 5.3). This dates from 1630-40 and is also of polychromed Beer stone. Conservation work carried out here in the early 1980s revealed some useful information about the polychromy that provides some context for the paint on the Leach monument¹⁰. It is therefore worth looking at this in more detail.

A look through the Colyton files in the archive of Herbert Read Ltd¹¹ reveals that here too, the paint was overpainted and “with a dramatic change of colour from an earlier scheme”. Cleaning tests carried out by Anna Hulbert in 1976 revealed two layers of overpaint, with the more recent and inferior decoration only partially applied, thereby incorporating some of the earlier scheme¹². The appearance of the overpainted Carewe-Pole monument today is therefore not dissimilar to the appearance of the Leach monument with its combination of original paint and overpaint.

Analysis of paint from Colyton revealed that the earlier painting was in good condition and the ground, primer, original and re-paint layers were all executed in an oil medium¹³. It was noted that the overpaint was deteriorating rapidly with damp and salts causing major structural problems which warranted drastic action¹⁴.

10 Eastham, M. ‘Conservation of the Carewe-Pole Monument’, in *Case Studies in the Conservation of Stone and Wall Paintings: Preprints of the Contributions to the Bologna Congress, 21-26 September 1986*, eds. Brommelle N.S and Smith. P. IIC 1986. 170-173.

11 Archive of Herbert Read Ltd, Devon Records Office. Colyton Files, 1975-1982.

12 Hulbert, A. *Report on Pole Monuments, St Andrew’s Church, Colyton*, Council for the Care of Churches, London, 1976.

A look at some of the findings from her report shows certain similarities in the polychromy of the Colyton and Cadeleigh monuments. At Colyton, the effigy wears grey armour with vermilion padding at the edge, as does the kneeling Sir Simon at Cadeleigh, though the red so far analysed is from the intermediate scheme. The cushions bear vermilion on top and green underneath, in the 1903 scheme at Cadeleigh and in the repaint at Colyton and the gold around the coffering of the arch at Colyton is echoed in the yellow-glazed silver at Cadeleigh.

13 Analysis was carried out in 1975 by Gerry Hedley of the Courtauld Institute of Art on a variety of monuments in the church.

14 Although the importance of the painted decoration was recognised at Colyton the priority here was to secure the structure of a deteriorating monument. Regarding the polychromy, the conservation approach of twenty to thirty years ago involved different techniques and a different approach to that of today.

At Cadeleigh, whilst the stonework of the Leach monument is certainly in need of some attention the care of the painted surface is a considerably more delicate and elaborate operation. The Leach monument is unusual in the extent and excellent condition of its original decoration, and the importance of the monument makes this a particularly valuable survival.

5. Condition Assessment

5.1 The surface of the monument is grey with dirt and coated with cobwebs and dust (Photographs 36, 37, 33), particularly where it is inaccessible. An estimated 85 % of the original paint survives. Approximately one third of this is now visible where the 1903 repaint has fallen away (Photographs 17, 18). Whilst some areas of detaching paint are obvious, others only become apparent when the surface is handled as it may be intact. An estimated 50% of paint is loose.

There have been various causes for the decay (see 6.1 below), resulting in a range of types of deterioration. There is no discernible pattern except the pilasters west of the window are more deteriorated than those on the east side (Photographs 61 and 6). Throughout, both schemes are flaking (Photographs 24, 25) but at this stage it is impractical to try and map loose paint, although this would be recorded as it were identified during conservation.

1903 scheme

Relatively cheap materials were used in the 1903 refurbishment, resulting in a poorly bound and friable paint layer. In places it is disintegrating and is easily removed (Photographs, 14, 42). On the lower section of the monument the 1903 paint is flaking badly. In some areas, such as on the armour on the south side of the effigy of Sir Simon (Photograph 19), where the adhesion is particularly poor, the overpaint has come away very cleanly, exposing the earlier paint. In other places the detachment of the top paint scheme has resulted in a total loss of polychromy leaving the bare stone exposed (Photograph 16, 24, 28, 29, 58).

The softness of the 1903 paint makes it vulnerable to air born dirt which has become ingrained (Photographs 54, 31, 43).

Original scheme

In many places, particularly on the figures, the earlier paint has lost its adhesion to the stone support which, as stated above, may only become apparent during handling. Where the earlier decoration is revealed it still retains its original patina, for example on the rosy cheeks of one of the kneeling children (Photograph 59).

The condition of the paint varies considerably and this is clarified when looking at the paint cross-sections (see 6 below and Appendix 1). Degradation of certain pigments has caused some alteration in the original scheme. In places the blue has degraded to green and red lake identified through analysis has largely faded. Most disturbingly the silver-gilt has tarnished, resulting in a reversal of the tonality of the polychromy; what should be the brightest areas now read as dark.

In discussing the overpaint in 1974 Hugh Harrison comments¹⁵;

¹⁵ Harrison, H., January 1974.

“Underneath this indiscriminate coat of paint, there are microscopic signs of previous decorations. These are so small that they only hint at the original colour scheme”.

Since this time there have clearly been extensive losses as the original scheme is no longer just “hint[ed] at”. The deterioration of the 1903 layer has therefore continued over the past thirty years.

It is useful to compare one of the photographs taken for the 1994 report (Appendix 4.5) which have survived better than those from 1974, with one taken recently (Photograph 11). Thus, we can see that paint losses in the red edging on the back of the armour of the kneeling figure of Simon have continued, revealing a little more of the dark grey of the armour from the 1660 decoration and more of the buff-coloured layer that lies between the grey and the red. The flaking, although continuing, is happening gradually.

Although in general there are few obvious new losses indicated by clean stone patches, some detached flakes have been observed, lying on the base of the monument (Photograph 25) or caught up in surrounding cobwebs (Photograph 36). Photographs however suggest that there is no evidence of a recent acceleration of decay.

An inspection around the church suggests that the present environment is stable and this is reinforced by the comments of John Alexander, architect, in his recent Quinquennial report¹⁶:

“The church building and the site has been well maintained in recent decades. It is currently generally well protected from the weather and in good decorative repair”.

He also observes that “all internal wall surfaces appear in exceptionally good condition”, having been, “painted in recent years with appropriate lime washes/paints.” The fact that there is no evidence of increased paint loss wherever the monument is in contact with the wall must indicate that the monument is not suffering from penetration of damp.

The original paint has lasted relatively well considering there have been periods of damp, major repairs and many years with no professional attention. There is an ongoing problem in that the painted decoration has been long neglected and is in need of attention. The parish have commissioned three reports in the past twenty five years, recognising this fact. If the paint surface were treated to remedy the historic deterioration, there is no reason why it should not remain stable for many years.

5.2 The monument was examined under both daylight and artificial light, using head lenses (x6 magnification) and hand lenses (x6 and x20). Scaffolding was provided, which gave close access to the full height of the monument but not to its depth. Several cleaning and consolidation tests were carried out (Appendix 3) and a total of twenty five samples taken for analysis.

6. Causes of Deterioration and their Treatment

6.1 Although there have been problems in the past the monument now exists in a relatively stable environment. Most of the deterioration can be attributed to natural aging, some instability in the materials and common wear and tear of life in a church.

¹⁶ Quinquennial report dated 19 June 2008.

As stated above, there are indications of previous damp damage, though these are limited. The pilaster west of the window (Photograph 61) has at some stage suffered extensive paint losses compared to that on the east side (Photograph 6). It is likely that these relate to historical problems; the monument was rebuilt in 1903 and extensive work will have addressed these issues (Appendix 4.4). Major repairs such as the resetting and re-glazing of the window alongside the rebuilding of the north wall will have greatly improved the conditions in the north east corner of the church. Perhaps the new paint was applied before the excess moisture in the stone could evaporate.

Poor maintenance of the exterior rainwater goods in this location will also have contributed to damp problems since the 1903 work and the guttering and downpipes appear to have been replaced around 1994. More recent repair work and maintenance has ensured that the environment is relatively stable at present.

However, damp patches on the exterior wall, noted on a visit in particularly wet conditions, appeared to be caused by water leaking from a joint in the guttering. This is easily remedied and has been discussed with the architect and noted in his report¹⁷.

Other contributors to decay are the intervention of man, unstable original techniques, and age. There is little general awareness about the care of painted surfaces, and people can often cause damage inadvertently. It is probable that the paint surface was not adequately protected during the 1903 renovations, the monument is still being used for flower displays, and well meaning dusting may also be a factor. The suitability for purpose, quality and correct application are all a factor in the speed of degradation of materials. For example, the tarnishing of silver is an inherent issue. The poor quality of paint used in the 1903 repaint has meant that it is not very long lasting.

It is not clear if light from the window behind is affecting the paint in any way; cleaning may reveal differences in areas subjected to direct light from here, though none is immediately apparent. The effigy of Lady Katherine is protected from the light as, although she is adjacent to the window, the light is obscured by the marble inscription panel with its flanking figures.

Simple environmental monitoring is currently underway, with a hair hygrometer installed on the monument to look at temperature and Relative Humidity. Monitoring is ongoing, due to the discovery of a faulty monitor. Although no problems are anticipated regarding the environment, measurements can continue whilst this report is being circulated and read. Further information can be added to this report later in the year.

Protimeter readings taken in June, from fillings in joints between the stones, gave readings of between 12% and 22%.

6.2 Analysis

Paint samples were taken from across the monument, in order to identify the materials and techniques and understand the painting history. It was particularly important to establish if the later decoration was having an adverse affect on the original paint layers.

A total of twenty five paint samples, chosen to cover a good range of different pigments in a variety of locations with differing issues, were taken from across the front face of the monument (Appendix 2). These were first examined unmounted, under a magnification of

x25 to ascertain they were representative and coherent and then sent to Catherine Hassall for analysis (Appendix 1).

Samples were mounted in resin and polished to reveal the cross-sections which were examined under magnifications of x200 and x500. Paint from key areas was dispersed onto glass slides and the pigments identified under polarising light at magnifications of x1000. The scanning electron microscope was used to look at features in the 1903 scheme and the intermediate scheme.

Paint cross-sections examined at magnifications of x200 or x500 showed up to four schemes of decoration. It will be helpful to look at the results of these analyses in some detail as an understanding of the polychromy is key to this report.

Results

A total of four different schemes were identified and these are discussed below and in Appendix 1.

Earliest scheme

Samples from the effigy of Simon showed evidence of paint below the distinctive 1660 ground, showing that the earlier figures were polychromed on their original monument and then repainted when assembled in their new location, along with everything else (samples 1 and 2). Sample 1 taken from the hair of Simon (Photograph 22) consisted of a chalk gesso, followed by a ground of pure lead white, overlaid with a dark brown consisting of umber, carbon black and a little lead white.

In sample 2, from the top of Simon's armoured foot, and missing a ground, the earliest scheme showed an almost black layer, made of carbon black with a little lead white, depicting the grey of the armour.

1660 scheme

Analysis reveals that the palette of the 1660 scheme consists of: chalk, lead white, blue verditer, smalt, red lake, red lead, iron-oxide red, yellow ochre, carbon black, silver leaf and a yellow organic glaze. The blue in the 1660 decoration was mixed from lead white, finely ground smalt and blue verditer. According to Catherine Hassall "The combination of smalt and verditer is unusual. In some samples the pigment is almost all smalt, but in others the two pigments were used in almost equal amounts."

The technique of the 1660 decoration involved the application of a coat of chalk gesso, of varying thickness, followed by a thin coat of pure lead white primer, (probably in an oil medium). A distinctive grey ground consisting of lead white, finely-ground charcoal black and yellow iron oxide was laid over the lead white primer, apart from on the kneeling figures. This layer supports the painted decoration of the first scheme. In the case of the silver decoration, a further three layers are present; the yellow undercoat of yellow ochre, red lead and lead white, then the silver leaf, and finally the thick yellow glaze. As no size was observed overlying the yellow undercoat in the cross-sections, the silver must have been adhered directly onto it, whilst it was still tacky.

The glaze over the silver is now brown and no pigment particles survive in the layer; it is likely to have been tinted with an organic stain or dye. The effect of this glaze over the silver leaf would have been to imitate gold (Photographs 32, 34, 53). This may have been

because funds were limited but it could also be a deliberate choice to create a cooler 'gold' effect. However, this technique, combining unstable silver with organic glazes would have produced a showy but shorter-term decoration than using real gold leaf.

The dark grey of the armour consists of lead white and charcoal black. The buff-coloured layer that lies over this grey is exposed where the top red decoration has been lost on the back of kneeling Simon's armour (Photographs 11 and 13). It is possible that this belongs to the 1660 decoration, highlighting features on the armour, as there is no dirt separation between the two.

Intermediate scheme

In spite of the fact that we read in Beatrix Cresswell's account¹⁸ of the neglect there had been in honouring Simon Leach's wishes regarding the upkeep of his monument, traces of an intermediate scheme indicate that an attempt at least was made to refresh the fading colours. The eight samples that showed this scheme come from the easily accessible parts of the monument, suggesting that it was not a wholesale redecoration. The intermediate scheme so far noted takes the form of a pale green, overlaid in places with a red.

Samples 20 and 24, taken from the red edging of the armour of the kneeling figure of Simon (Photographs 11 and 13) show this well, though flaking paint made it difficult to take a complete sample containing all layers. However vermilion was clearly seen painted over a pale greenish-yellow layer of lead white, blue verditer and yellow ochre.

A white applied over the dark grey of the armour may belong to an intermediate scheme and not the 1660 decoration.

1903 scheme

The 1903 scheme uses a limited palette of pale green, dark green, red and off-white, with a little chrome yellow. Analysis reveals that the green is a mix of zinc white, viridian and chrome yellow, French ultramarine and carbon black. Prussian blue was used also in some locations, such as in the mixed pale green where it was used with chrome yellow. The 1903 white was based on lithopone, a combination of zinc sulphide and barium sulphate and the red was pure chrome red.

Analysis and causes of deterioration

As has been noted, the condition of the paint varies considerably. Analysis enhances our understanding here. We can see how the paint on the lower figures is particularly badly affected and how these lower elements have received more interventions over the years than the upper sections.

Close examination of cross-sections of paint fragments from the same location can reveal, for example in sample 6 (Appendix 1), the 1660 blue of smalt and verditer in good condition or stained, cracked and altered to green. Blue verditer was known for its green cast and tendency to become greener¹⁹. Degraded oil will also have enhanced this effect. The greenish tone of the degraded areas may have been a reason why green was chosen for so much of the 1903 repainting.

Red lake in the original decoration has now largely faded, as it is prone to do, for example, in the original mix for the red mantling (sample 19) which consists of red lake,

¹⁸ Cresswell, p.95.

¹⁹ Harley, 1970, p.53.

red lead and lead white. Even where the 1903 red is thin or has been lost, and the original scheme is exposed the earlier red is hard to spot. In sample 21, from the cushion of one of the kneeling female children, where red was repainted in all three schemes, the translucent particles of red lake have virtually lost all colour.

The glazed silver has blackened and in sample 16 (Appendix 1), from the hair of a cherub, the yellow undercoat, silver and glaze were cracked and damaged by the time they were overpainted. However, samples 7 and 13 show untarnished silver still surviving in places and close-examination also revealed this (Photograph 60), though freshly exposed silver will soon tarnish, and this issue will need addressing, see below.

Analysis has revealed the presence of lithopone in the 1903 decoration. Catherine Hassall in her report (Appendix 1) states that lithopone

“was used in some house paints since the early 1890s, particularly in oil-bound distempers, where it was combined with chalk and tinted pigments.....some of the early lithopones were unstable and weathered badly.”

With lithopone used in the white and the mixed colours, this could explain why the paint has become so powdery.

Close examination of the painted surface makes greater sense in the light of analysis. Analysis and cleaning tests show that where the glaze is thin, usually on the high points, the silver has blackened, but the thicker deposits of glaze, in the corners still remain yellow.

In terms of artistic techniques it is now clear for example, that silver leaf is applied over large areas and not just confined to the elements needing ‘gilding’. It is obviously quicker to apply the leaf wholesale over a pilaster, then overlay either with a translucent yellow glaze to create ‘gold’ or an opaque blue for the background to provide a contrast to the metallic element, (Photograph 35).

There is evidence from the analysis that in certain places the overpaint may be causing damage. The top of the lower cushion beneath Simon’s head is delaminating (Photograph 24). The overpaint is thicker and denser here, and the original paint layers are thinner. In such places it is possible that the overpaint is exerting a pull on the original paint. A sample taken from the mantling at the top of the monument (sample 19) shows the paint separating cleanly between layers, while sample 20 shows how the later paint is also causing the earlier paint to split across the body of the layer.

The main issue is that the materials used in the 1903 restoration were not of the best quality. They were applied at a time when there was still recognition that such monuments required painting and a programme of maintenance that would have entailed repainting after removing the loose paint. The 1903 redecoration is over one hundred years old and is failing; in our opinion, this lack of maintenance is the main problem that needs addressing.

6.3 Our understanding of the conditions concur with the Kellands²⁰:

“The monument was last examined in 1994 when a large number of photographs were taken. It would appear from these that there has been little change in the condition of the monument since then, so any deterioration is not occurring rapidly.

²⁰ Kellands, 2007. 1.5.3 p6

It was mentioned then that the lower areas of the monument were damp, probably the result of its position against the north wall. It would seem the new guttering and downpipe may have stabilised this. We visited the monument in an abnormally damp period after several months of very wet weather and found no indications of excessive damp or damage.

....As with any large structure, the monument has ongoing needs for maintenance. It is now over one hundred years since anything was done to it and it has deteriorated gradually, particularly in appearance, whilst localised problems have manifested themselves."

Were there adverse environmental conditions, one would expect more evidence of recent paint losses or evidence of salts. There is no evidence of salts and none has been noted in any of the previous reports. Beer stone is relatively soft, so that the extent of crisp detail which survives is a further indication of favourable conditions.

6.4 Recent observations of the external north wall in the rain have shown that the rainwater goods need some attention. The architect has recommended in his recent report, that where brackets of the rainwater goods are rusting they should be "cleaned and repainted within the next five years". It would be best for the continuing well-being of the painted decoration if this could be done sooner rather than later.

7. Recommendations for Conservation

7.1. Our immediate recommendation for the PCC is that the monument should be touched as little as possible. At ground level, the loose paint is extremely fragile; further losses are likely and dusting by the church cleaners should be avoided. Similarly, it would be safest if flower arrangements are no longer housed on the stonework. Given how loose and vulnerable various limbs and heads are of the kneeling children at this level²¹, we would also advise that, if possible, the heavy flower stands are kept out of reach of the monument.

In terms of conservation, a priority would be to gently clean the paint surface, to remove all airborne dirt. A build up of dirt can be abrasive and harbour damp or insects. Cleaning will also restore the monument to its correct tonality- the sculptures for example along the upper registers are deliberately painted to look like Beer stone and should be white (Photograph 44). Cleaning will provide an opportunity to detect all loose and flaking paint which should be secured as it is encountered (see 7.2 and 7.5). If any untarnished silver leaf is exposed it should be protected with Paraloid B72.

It will be important to liaise with the stone conservators, to establish the sequence of work and discuss issues as they arise. A site meeting early on should therefore be a priority. We will need to define and clarify our areas of responsibility. For example, the marble elements, such as the columns, have not been considered as part of our remit, although they obviously play an important role in the polychromy of the monument. After conservation such elements may benefit from waxing, though this may not have been included in the Kellands' recommendations.

Repairs will need to be undertaken when paint has been cleaned and the 1903 overpainted loose and inappropriate plaster fillings removed. New fillings will need to be reintegrated as will any joints where plaster fills have been replaced. Issues such as who will carry out the application and re-integration of fillings will need to be addressed.

²¹ Kellands, 2007. 1.5.2 section iv.

It would be safer to work on the loose figures on the work bench. Where elements are to be dismantled or are already detached, they will need to be protected prior to handling. Ideally loose or detached figures could be worked on at ground level, on a work bench set up in the church.

In order to protect the painted surfaces prior to work being carried out on the structural aspects, after conservation, it may be an option to box in the effigies and this should be discussed with the stone conservators.

7.2 Cleaning and consolidation trials were carried out in a variety of locations, which are plotted and tabulated in Appendix 3.

Tests established that a simple repertoire of materials would be needed for cleaning and photographs 15, 20, 34, 41, 44, 52, 53 and 60 show some of the results. These vary from subtle to more dramatic.

On the face of the kneeling figure of Simon (Photograph 15), cleaning with swabs of deionised water removed the powdery green 1903 overpaint as well as surface dirt, to reveal extensive patches of original pink flesh colour and rosy cheeks. A little consolidation was also carried out here. During cleaning, an acrylic dispersion (see Table in Appendix 3) was fed behind detached edges of paint and the surface was tamped with a damp sponge to remove residues.

Where some staining remains after removal of surface dirt with swabs of saliva or deionised water, Synperonic A7 or triammonium citrate worked well.

The choice of materials is limited for the consolidation of polychromed stone²² and there is a need here to use consolidants that will be sympathetic for the 1660 and 1903 paint, which further restricts the choice. Materials tested for consolidation were isinglass and an acrylic dispersion, Lascaux 4176.

Most of the adhesives tested performed adequately and conformed to the following criteria:

- can be used at low concentrations
- would not darken or otherwise alter the appearance of the paint
- should remain colour fast over the ensuing years
- should remain reversible
- are water-based and non-toxic
- should not affect the porosity of the stone

A 5% solution of Lascaux acrylic dispersion 4176 penetrated well and was easy to use. It is a widely used adhesive for this type of work. Its good optical properties, its ease of application and its low cost, matched with the fact that it travelled well and was practical to use makes it our preferred choice of consolidant here.

Isinglass behaved equally well in tests and met the same criteria; it has also been used effectively in similar circumstances. One disadvantage may be that it is more expensive than the synthetic alternatives.

²² The issues are discussed in 'Stone Conservation: Principles and Practice', ed. Alison Henry, Donhead, 2006. Chapter 12, Weeks, C. 'Polychrome Stone', p237-261.

7.3 The monument is in need of overall attention and there would be no advantage in arranging a less than total job.

7.4 No deliberate attempt to either preserve or destroy the 1903 paint layer would be made. Tests have shown that where the 1903 paint is powdery it is likely to be removed or thinned during cleaning.

7.5 Cleaning and consolidation will need to be carried out at the same time and in a methodical manner so all passages of loose paint can be identified and treated. After consolidation the surface will be gently tamped through Japanese tissue, using a sponge, or pad of cotton wool, dampened with swabs of deionised water or saliva. All residues of consolidant and dirt will thus be removed.

Paint fixing can be carried out by pre-wetting with alcohol water followed by the adhesive. This can be applied with a brush, a pipette or a syringe according to the fragility of the paint. A heated spatula can be useful in places to press back into position lifting paint flakes, while the consolidant is still tacky.

Where areas of tarnished silver are exposed by the consolidation and cleaning process some reintegration might be desirable to restore the tonal balance (Photographs 52 and 54). A decision about this should not be made until the results of the conservation treatment can be assessed. Where untarnished silver is exposed, (Photograph 60) it will need to be given a protective coating of Paraloid B72.

It is likely with such extensive polychromy that further analysis may be required once conservation is underway, to clarify issues as they arise.

7.6 A full final, illustrated report, describing all methodology, materials, findings and observations will be submitted on completion of the work. This will be fully referenced and illustrated in compliance with the CCC guidelines.

8. Future Recommendations

8.1 If the environment remains stable, so will the paint. Instructions of what not to do (flower arrangements/dusting) will be detailed in the final report.

8.2 The paint surface should be inspected annually for the first three years, to check how it is settling after this major intervention, and subsequently in conjunction with the Quinquennial report. These inspections can be carried out with a step ladder and binoculars, unless anything is detected which might require more access.

9. Estimate

9.1 The parish will need to provide a scaffold, and we would need to liaise with the scaffolding company about our requirements. A supply of electricity, water and access to a toilet should also be provided.

Arrangements will have to be made so that the monument and the conservation equipment are safe for the duration of the work. Ideally the church would be kept locked when no one is on site, and a secure space provided for storage of tools and materials.

We would be able to work more efficiently and comfortably if we could work on loose and detached elements at ground level, having first protected the paint surface before the stone conservators have taken them down. An area of the church should be dedicated for work on the detachable elements.

The organ will need to be adequately protected before work begins.

9.2 To conserve the painted decoration on ‘the largest monument in a Devon church’ we set out our estimate below.

For the purposes of the estimate the monument was broken down into the following elements:

Attic

Reclining putti x2

Large cartouche + 2 smaller ones facing east and west (one detached)

West and east faces, framework to marble tablets

Lion’s head frieze 3 sides (8 heads)

Spandrels with figures x2

Coffered ceiling (21 panels with pendant roses)

Cartouches x2

Statues on pedestals x2

Entablature and central section

Acanthus cornice, frieze with cherubs and architrave x 5 lengths

Panelled ceilings with pendant pineapples and cherubs x 2

Capitals x8

Square pilasters with ribbon work x 7 faces

Framing of back panels (not inscriptions)

Border of central inscription panel, with figures and strapwork frame, (not including Ashburton inscription)

Bases of columns

Effigies x 2

Kneeling figures x 2

Tomb Chest

Frieze with central putto and lions heads x2 plus at least 1 detached head on west face. (East return head impossible to access,)

Strapwork garlands. 3 on front face, 2 on west face, 2 on east (inaccessible).

8 kneeling children, prayer desk

Capitals and bases of columns

The work is estimated to take a total of 30 weeks. This would be carried out by two and occasionally 3 conservators over a period of around 15 weeks.

Site meeting with stone conservators	£500.00
Analysis	£450.00
Report	£3000.00
Materials	£300.00
Travel	£2,000.00
Labour	£26,250.00
Accommodation (B and B in the parish @ £22 per night) + subsistence	£4,200.00
Total	£36,700.00

Cost of scaffold not included

The 3 gilded inscriptions cut in black marble have not been included or other marble elements such as columns, side panels on upper canopy

9.3

We do not charge VAT.

9.4

This estimate will be valid for a period of twelve months.
We would submit invoices on a monthly basis.

9.5

Eddie Sinclair is an accredited member of ICON and was accredited by UKIC in 2000. She has 29 years experience in conservation. Madeleine Katkov has worked in the field of wall paintings and polychromy conservation for more than 35 years, having overall responsibility for several major projects. She is now combining academic study with occasional conservation work.

Regarding insurance Eddie Sinclair has a combined 'All Risks' insurance policy. This covers her for Professional Indemnity and Public Liability.

10. Sources

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11.1 Appendix 1: Catherine Hassall Paint Analysis Report

MONUMENT FOR THE LEACH FAMILY, Cadeleigh Church, Devon

The monument was built in 1660, but incorporates the two earlier figures of Sir Simon and Lady Katherine Leach. It is carved from Beer stone.

Twenty five paint samples were taken by Eddie Sinclair during an inspection carried out in March 2008. The locations are marked on Appendix 2, below.

- 1 Earlier effigy of Simon Leach, hair on top of head
- 2 Earlier effigy of Simon Leach, foot
- 3 Third female child (from prie-dieu), front of dress
- 4 Lady Bridget Leach. Dress
- 5 Lady Bridget Leach. Dress, detached fragment from same area as 4
- 6 Earlier effigy of Simon, lower cushion
- 7 West shield, west lion
- 8 West side, pair of capitals, right hand capital
- 9 Canopy coffering. Background
- 10 Canopy coffering - adjacent to 9
- 11 Pilaster edge. Attic
- 12 Figure of Time - thigh
- 13 Head of cherub, east side
- 14 West female figure, leg
- 15 West female figure, snake
- 16 Central putto's head from broken pediment, hair
- 17 Base of central heraldic shield, attic
- 18 Central heraldic shield, mantling, white plume
- 19 Mantling, west side- red
- 20 Kneeling Simon Leach - red border of armour
- 21 Third female child (from prie-dieu), cushion
- 22 First male child (from prie-dieu), back of hose
23. Leg armour of Simon Leach, effigy
24. Kneeling Simon Leach, red border of armour, repeat
25. Kneeling Simon Leach, armour

Examination

The samples were examined under low magnification, and then mounted in cold setting resin, to be cut and polished as cross-sections. Paint from key layers was dispersed on glass slides and the pigments identified using a polarising light microscope at magnification x1000.

RESULTS

The upper parts of the monument do appear to have only been painted twice - once in 1660 and again in 1903. Samples taken from the lower part of the monument show three schemes, proving that some repainting took place on the lower levels in the period between 1660 and 1903.

The reclining figures appear to have been painted before 1660, as they were painted four times, which is more than any other part of the monument.

Earlier reclining figures

Sample 1, 2 and 6 were taken from the reclining figure of the older Simon (and 23).

Sample 6, from the cushion, had nothing under the 1660 scheme, but Samples 1 and 2 did have an extra scheme.

Unfortunately, the distinctive grey ground used in 1660 was not present in either Sample 1 or Sample 2, and the other pigments used in the early layers were not sufficiently distinctive to attribute them with certainty to a particular scheme.

In Sample 1, taken from the hair, the earliest scheme consisted of a ground of pure lead white, followed by a dark brown mixed from umber, carbon black and a little lead white.

In Sample 2, taken from the foot, the earliest scheme consisted of a near black, mixed from carbon black and a little lead white. In this sample there was no lead white ground and the black was resting on what looked like bare stone.

1660 preparatory layers

A coat of chalk gesso was applied in some areas, at least. It can be best seen in Sample 13 where it was exceptionally thick.

The gesso was primed with a thin coat of pure lead white oil paint. [Note - no organic analysis was carried out. It has been assumed that the binder in this scheme was oil from the fact that the lead white that was used has survived unchanged].

The white primer was followed by a grey ground layer of lead white tinted with finely-ground charcoal black and some yellowish brown iron oxides. The grey ground was found in Samples 6, 7, 8, 9: 11, 12, 13, 14, 15, 16, 17, 18 and 19.

The grey ground was not found in Samples 3, 4, 5, 20, 21, 22, 23, 24 and 25. These were all taken from kneeling figures which presumably were treated differently. Perhaps different painters were involved.

Silver gilt decoration used in 1660

Silver leaf, with a thick yellow glaze over the top, was found in Samples 7, 8, 13, 15, 16, 17 and 18.

A dull yellow undercoat for the silver was painted over the grey ground. It was mixed from yellow ochre, red lead and a little lead white. The silver leaf must have been laid over the top while the paint was still sticky.

The silver has largely blackened, but a glint of untarnished metal can still be seen in some of the samples, e.g. Samples 7 and 13.

A thick glaze was applied over the silver. It is now brownish in tone, but lit from behind, it still has a yellowish colour. No pigment particles were found in the layer, and the colour must have been produced by an organic stain, or dye.

Pigments used in 1660

The most widely used colour was a blue mixed from lead white, finely-ground smalt, and blue verditer. The combination of smalt and verditer is unusual. In some samples the

pigment is almost all smalt, but in others the two pigments were used in almost equal amounts.

The condition of the paint varies considerably. In sample 6, one fragment shows the paint layer intact, and still a strong blue colour, but in another fragment, the layer has become stained and cracked, and now looks green. The greenish tone of the degraded areas may have been the reason why green was chosen for so much of the repainting that took place in 1903.

The red in Samples 19, 21 and 22 was mixed from lead white and a red lake that has now largely faded. In Sample 19 this red is over the usual grey ground, and is overlapped by a thin layer of the blue smalt mixture, so we can be confident that it is the original paint. In Samples 21 and 22, the grey is missing, but the remains of the red pigment look very similar to that found in 19.

The red seen in Samples 4 and 5, taken from the kneeling figure, is a different mixture and may therefore belong to the later repaint rather than the original scheme. The red in these samples was a mixture of red lead, red iron oxide and lead white.

Lead white with a few particles of black in it was used for the figure of Time. This is certainly part of the 1660 scheme as it is over the usual grey ground. A white used for the reclining figure's head and feet [Samples 1 and 2], may also be from this date, but the grey ground is missing, so it is impossible to be sure.

The dark grey of the armour is a mix of lead white and carbon black, applied as an undercoat and finely ground as a top coat. A buff-coloured layer over the dark grey could be from a painted decoration on the armour, as there is no dirt between the grey and the buff.

Intermediate repaint on lower parts of monument

A very pale greenish yellow paint was found in Samples 1, 2 and 3. It was mostly lead white and ochre, but contained a few particles of blue verditer. A similar pale green was found in Sample 20, under red.

The vermilion found in Samples 20, 21 and 24 seems to have been from this intermediate scheme. In Samples 20 and 24 the vermilion was painted over a pale greenish yellow layer of lead white, blue verditer and yellow ochre. In Sample 21 the vermilion was painted over a lead white layer.

Verditer was largely dropped by painters in the eighteenth century after the invention of Prussian blue in 1704, but continued to be used by decorators for wan papers and house paints until circa 1810.

1903 scheme

Off-white, dark green, pale green and red were used.

The off-white was based on lithopone which is a combination of zinc sulphide and barium sulphate. Lithopone was used in some house paints since the early 1890s, particularly in oil-bound distempers where it was combined with chalk and tinted pigments. The SEM analysis of a lump of the white confirmed the presence of chalk as well as lithopone, and it seems quite likely that the paint used on the monument was a type of oil-bound distemper.

Some of the early lithopones were unstable and weathered badly. If this was one of them it would explain why it has now become very powdery.

The green, which was painted over a very thin undercoat of pale grey, was mixed from zinc white, viridian, chrome yellow, French ultramarine and carbon black of plant origin. In some samples, Prussian blue was also detected. In the pale greens it was in combination with chrome yellow, and it seems to have been a pre-mixed green, but in the darker greens it is not clear: some samples suggest it was pre-mixed, other suggest it was added as plain blue. The red was pure chrome red.

SAMPLE 1

Earlier effigy of Simon Leach—
hair on top of head.

More schemes than elsewhere

[x200]



The original scheme had brown
over a pure white ground.

The brown is disturbed.

[x500]

•



SAMPLE 2

Earlier effigy of Simon Leach —
foot

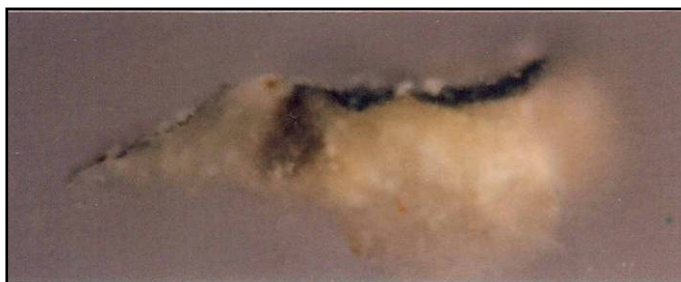
The same upper layers as in
Sample 1,
but the original colour was black.

[x200]



Fragment with stone and first
paint layer.

[x200]

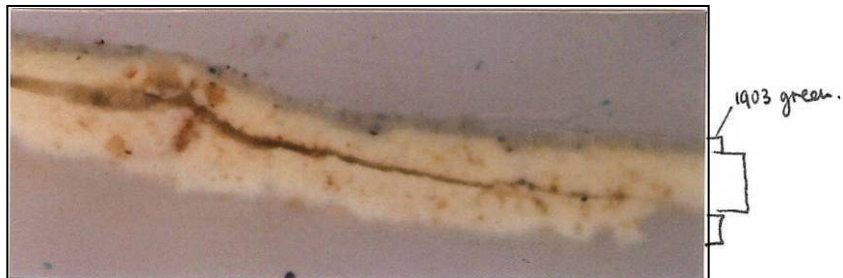


SAMPLE 3

Small kneeling female figure,
delaminated samples

Off-white, under the present greenish
paint on cream.

[x200]



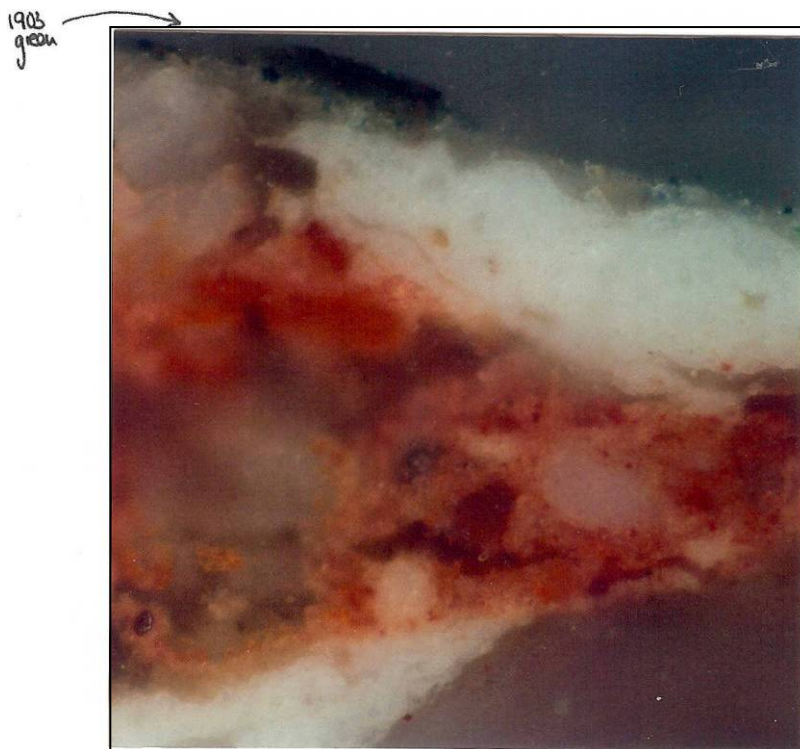
SAMPLE 4

Lady Bridget Leach, dress

A layer of red lead, red iron
oxide and
lead white is sandwiched
between
layers of off-white.

The present green is on top.

[x500]



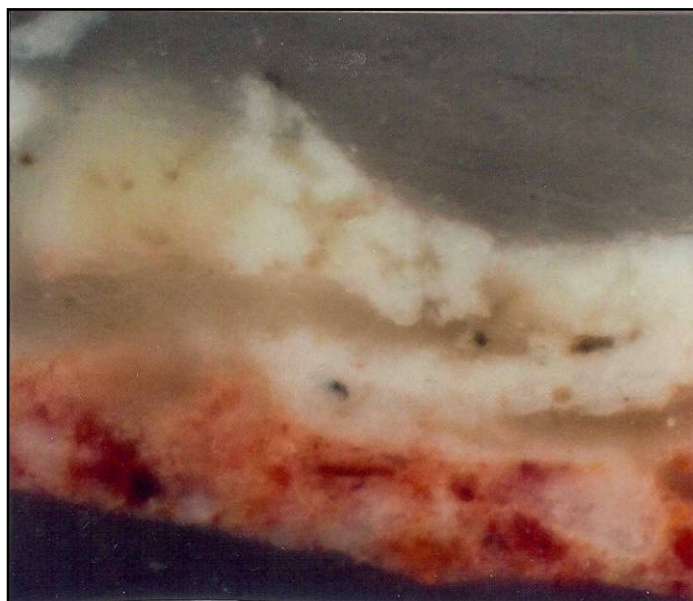
SAMPLE 5

Same area as 4

Perhaps upside down.

There seems to be no separation
between
the red and the white layer.

[x500]

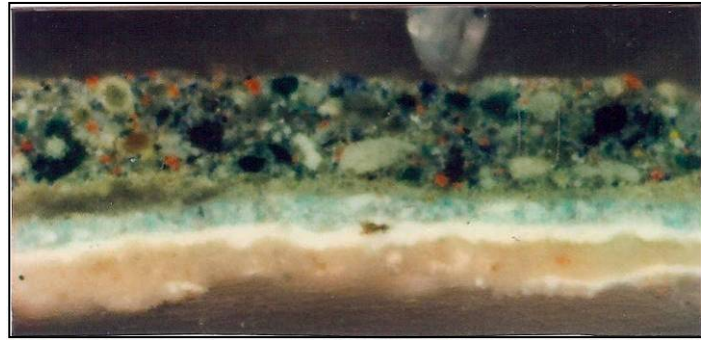


SAMPLE 6

Earlier effigy of Simon, lower cushion

Fragment (i) with thick layer of 1903 green over original blue.

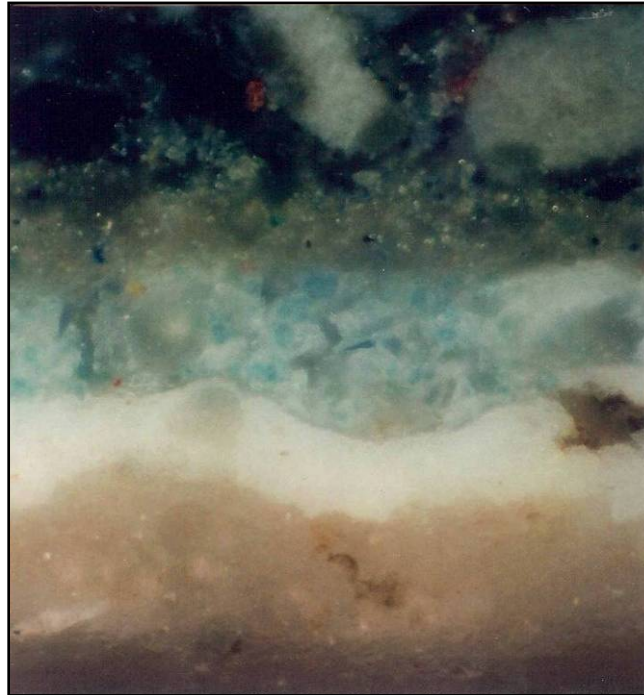
[x200]



1903 green.
grey undercoat
gesso

Detail of original blue which is mostly smalt, but also contains some blue verditer.

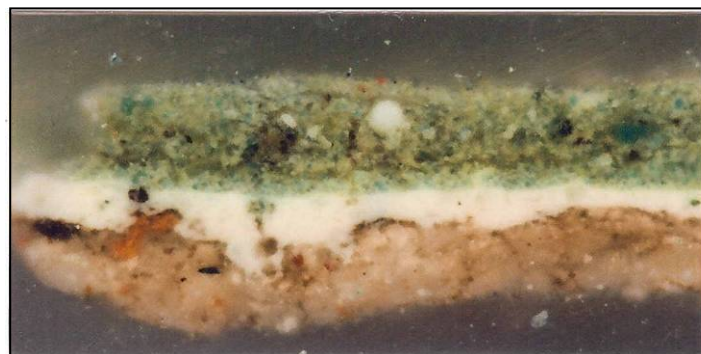
[x500]



Fragment (ii)

In this piece the original blue is stained and cracked. It looks green.

[x200]

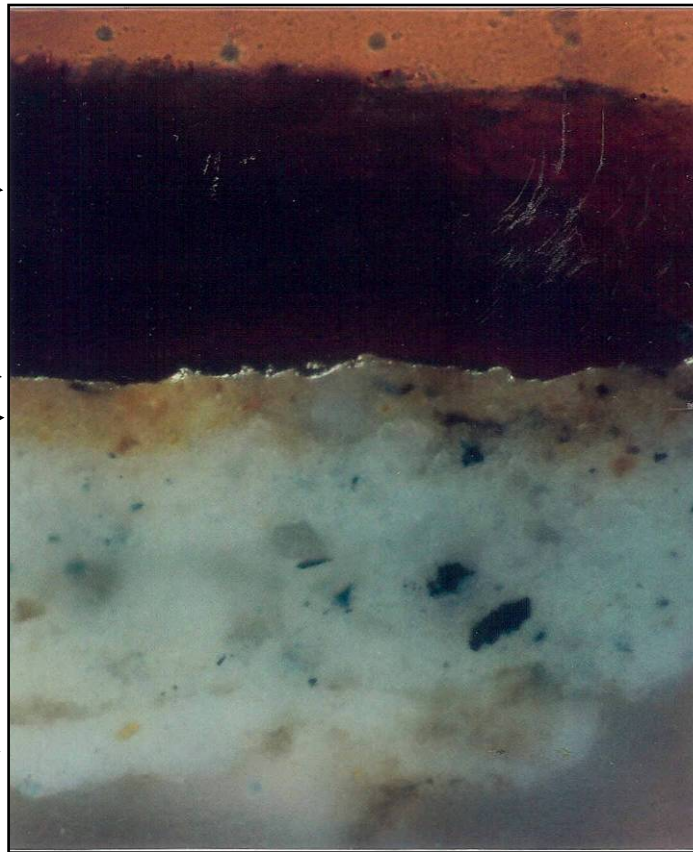


1903
smalt +
verditer.
lead white
gesso

SAMPLE 7
West shield, west beast

- Yellow glaze →
- Silver →
- Yellow underpaint →
- Grey ground →
- White primer →

[x500]

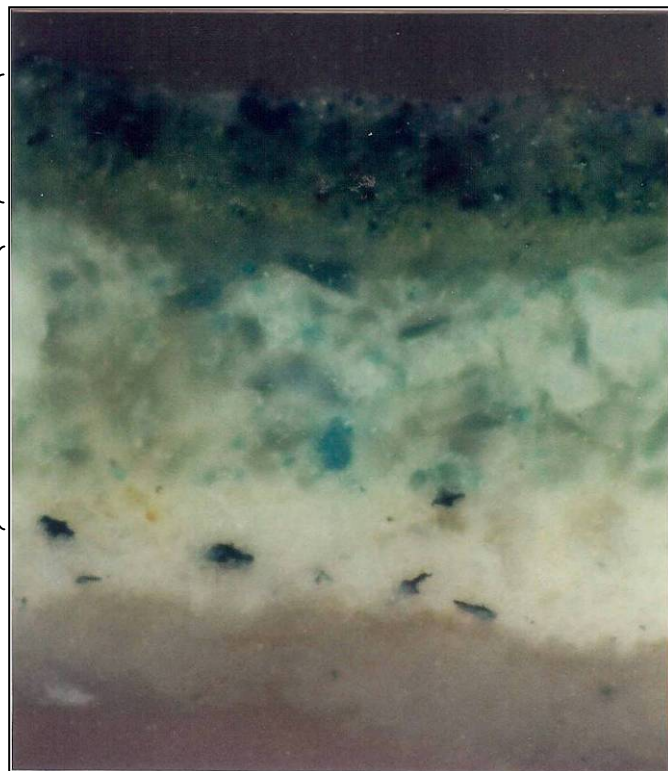


Sample 8 the same as 7

SAMPLE 9
Canopy coffering, background

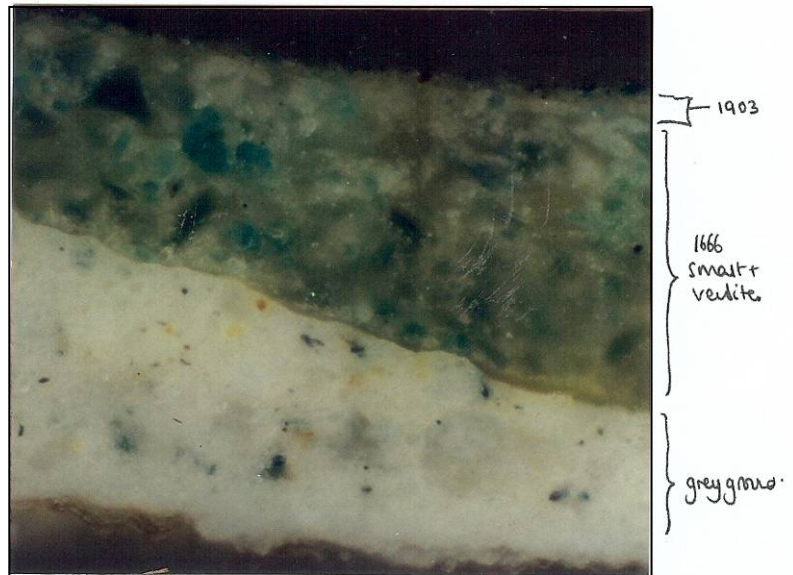
- Present dark green based on Prussian blue, chrome yellow, →
- French ultramarine & zinc. white
Original blue of smalt, verditer and lead white →

[x500]



SAMPLE 11
Pilaster edge

[x200]



SAMPLE 12
Figure of Time - thigh

1903 white

Original white

Grey ground

White primer

[x500]



SAMPLE 13
Head of cherub, east side -large
sample of loose paint

Thick gesso, followed by white
priming, grey ground and then the
silvering layers.

[x200]



SAMPLE 16

Central putto's head from broken pediment - hair

Two fragments, showing that the original silvering scheme had become damaged by the time it was painted over. The grey ground remained intact but the yellow undercoat, silver, and glaze were cracked and damaged.

[x200]

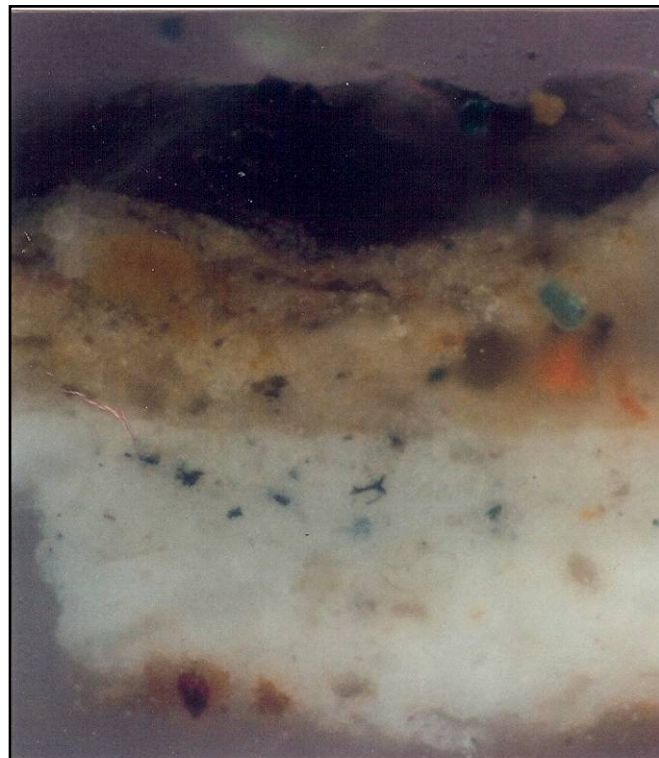


SAMPLE 17

Base of central cartouche, attic

In this piece the layers are intact, but the silver leaf has completely blackened.

[x500]



Sample 18 the same as 17

•
SAMPLE 19

Mantling, west side - red

In this fragment the original layers have separated.

The bright red at the top is the 1903 scheme.

[x200]



Another fragment. This one without the 1903 red, but a better example of the original scheme.

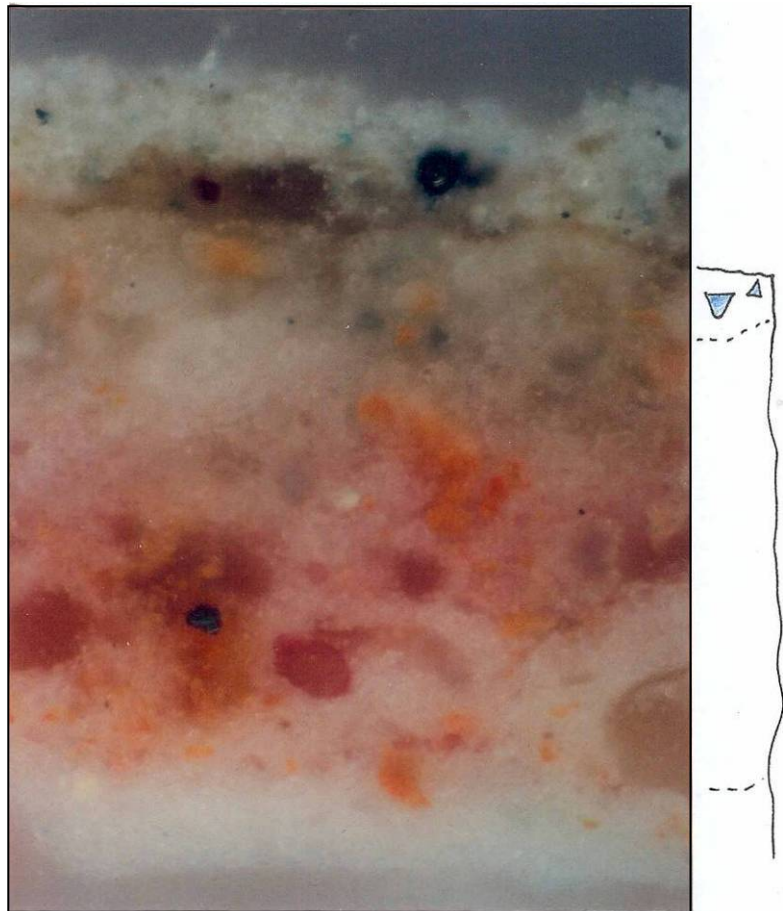
[x200]



Thin overlap of lead white → and smalt.

Original red of red lead, red lake and lead white

[x500]



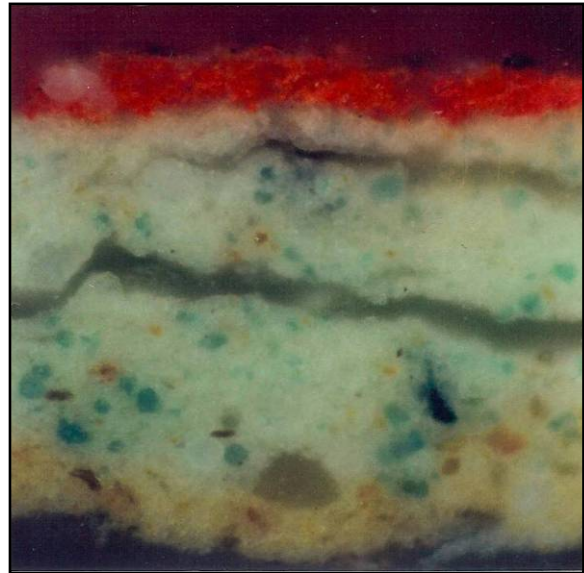
SAMPLE 20

Kneeling Simon Leach, red border
of armour

Vermilion on top of a layer of lead white, blue
verditer and ochre.

The dull yellow at the bottom looks
like the undercoat used for the silvering.

[x500]

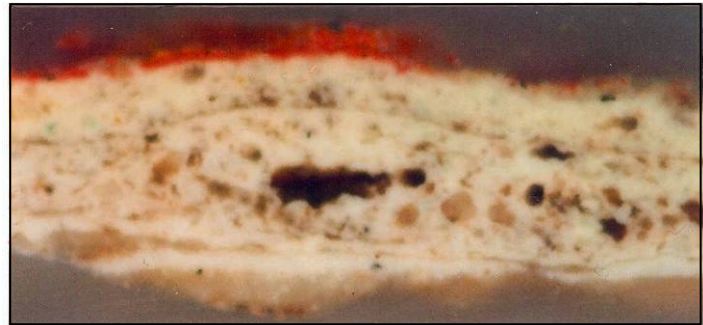


SAMPLE 21

Third kneeling girl, cushion

Three lots of red.

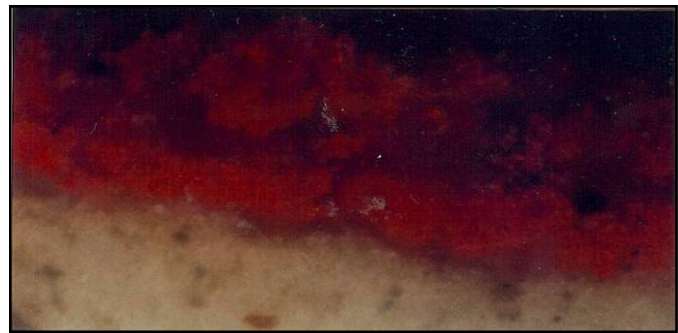
[x200]



1903 red

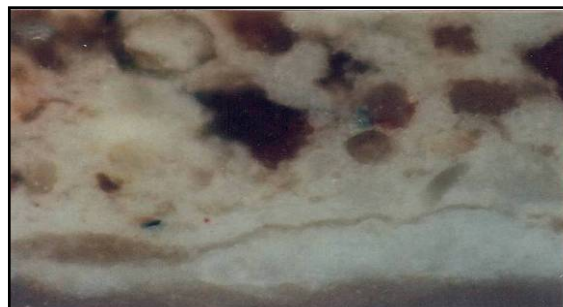
Vermilion of
intermediate scheme

[x500]
Original faded



Original faded red lake

[x500]



SAMPLE 22

Kneeling boy, back of hose

1903 layers



Original layers

[x200]

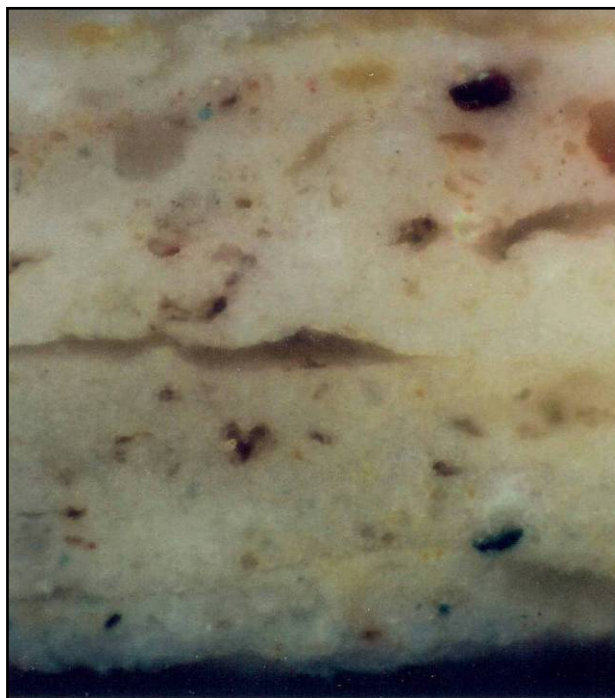


[x500]



The original paint contained
some red lake, now faded.

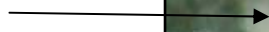
[x500]



SAMPLE 23

Leg armour

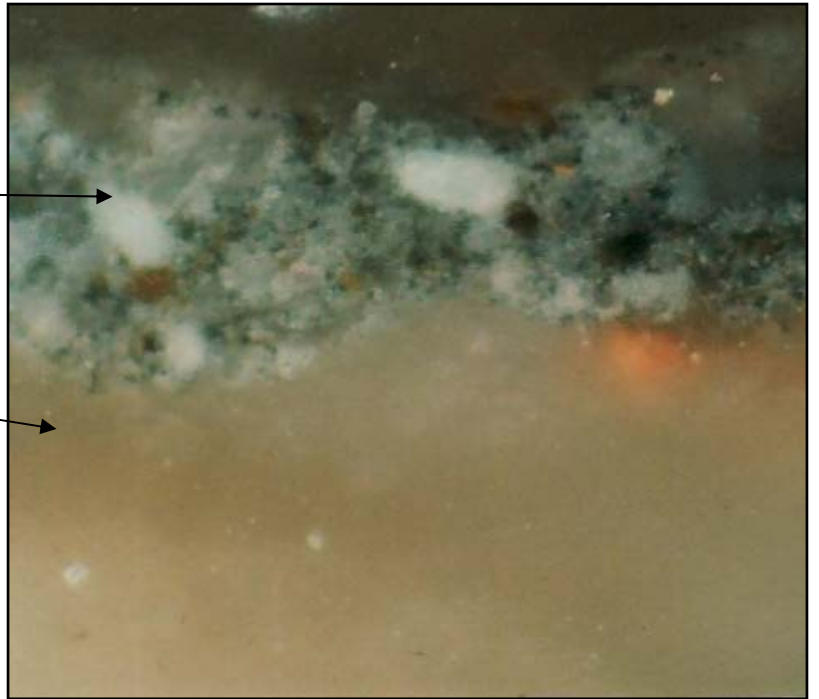
dark grey



gesso



[x500]

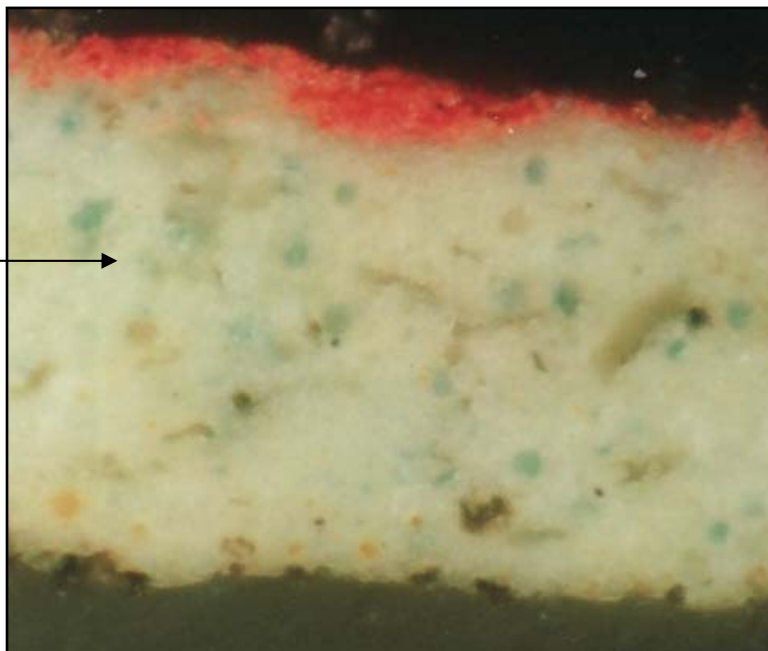


SAMPLE 24
Back of kneeling figure

Upper layers

layer with verditer
particles

[x500]



Lower layers

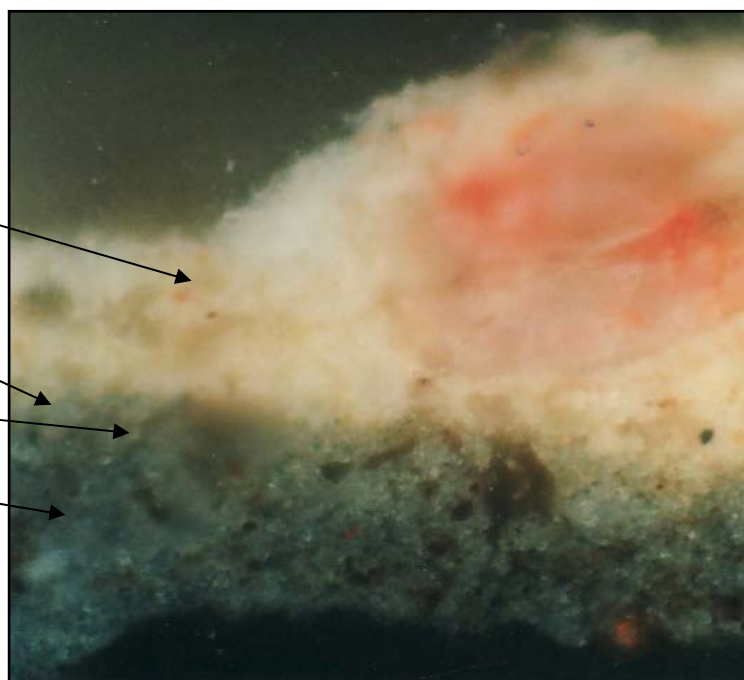
buff layer [lead white,
ochre + red lead]

no visible dirt

top coat of grey

undercoat of grey

[x500]

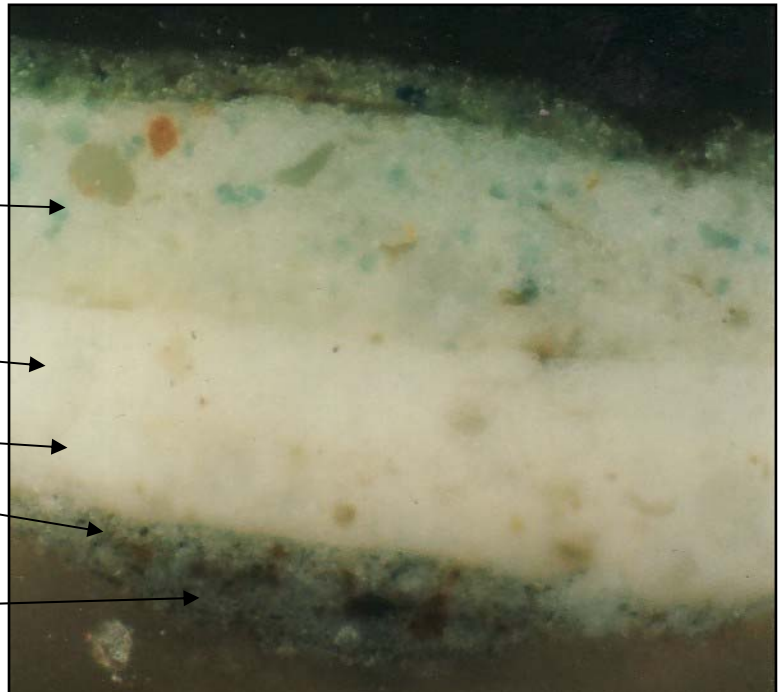


SAMPLE 25

Front of kneeling figure

Upper layers

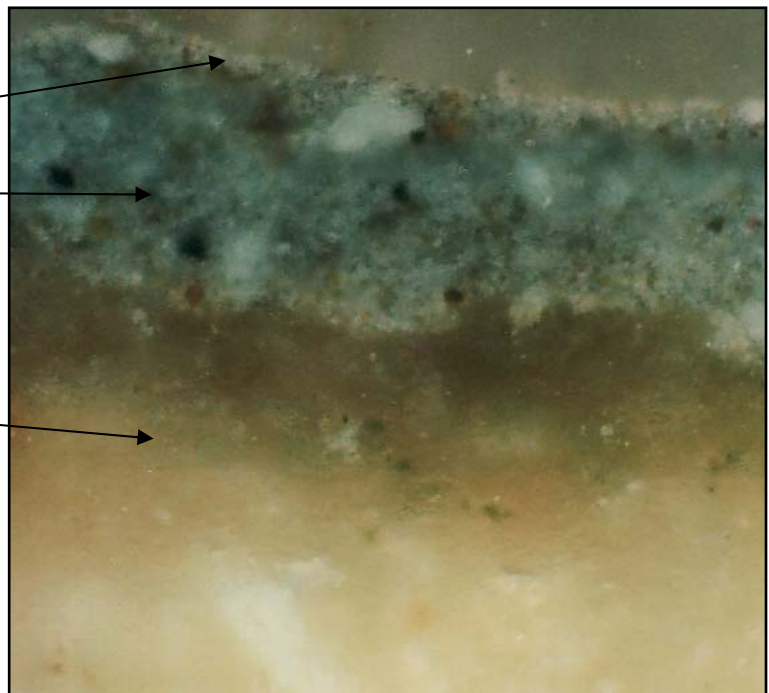
- layer with verditer →
- white scheme →
- pale grey u'coat →
- top coat of dark grey →
- undercoat of dark grey →



[x500]

Lower layers

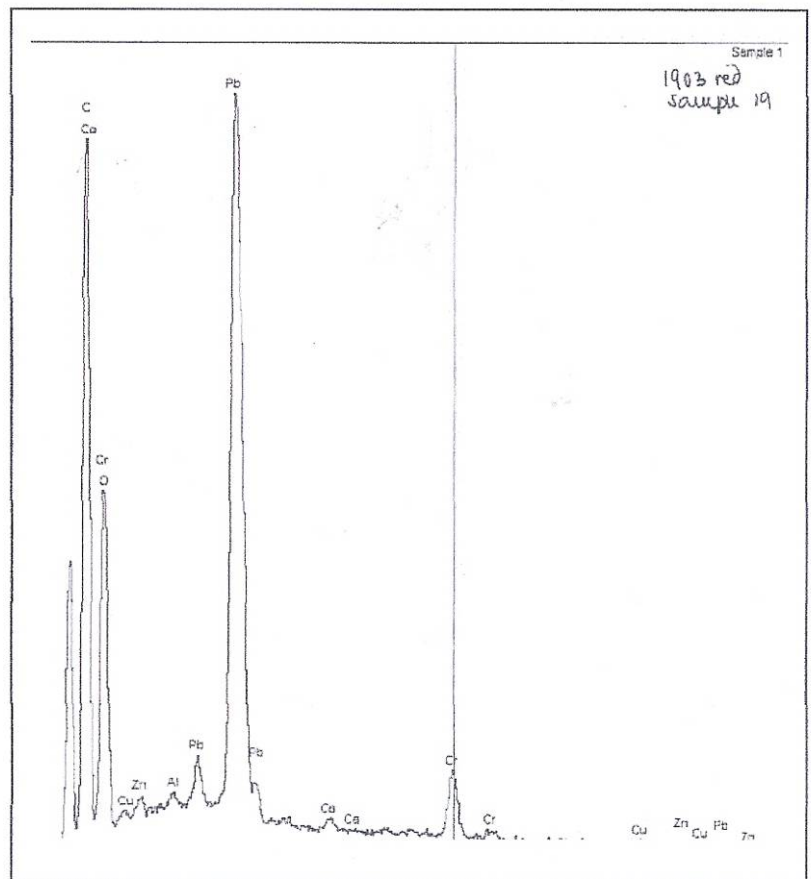
- top coat →
- undercoat →
- gesso →



[x500]

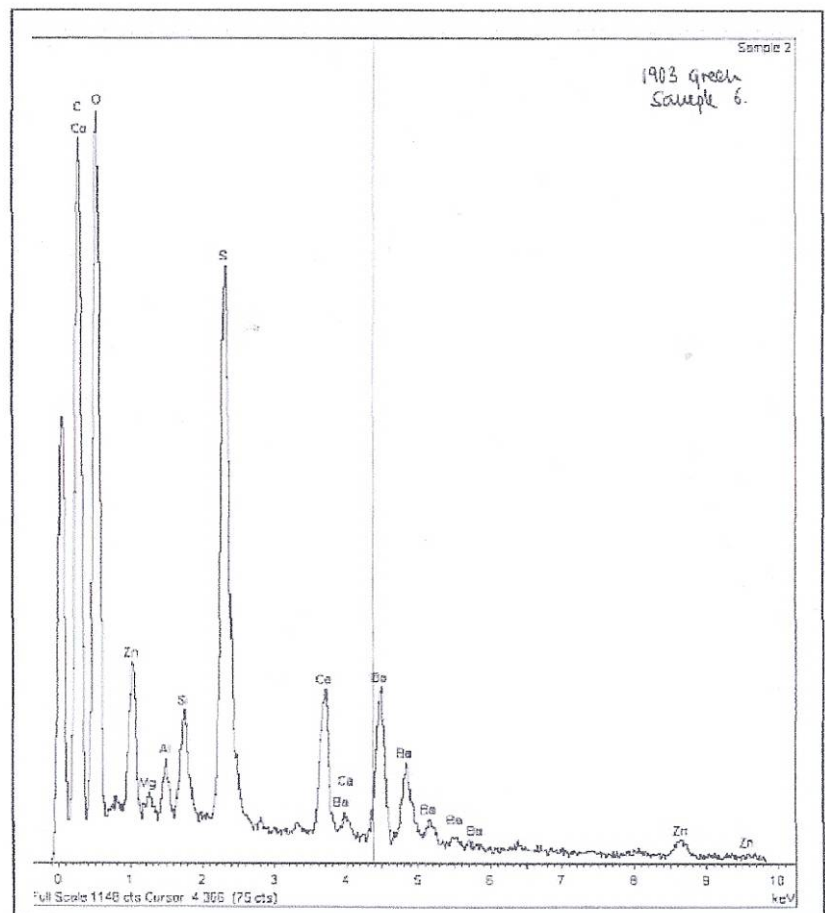
SEM ANALYSIS of the 1903 red in Sample 19

The spectrum shows features for chromium [Cr] and lead [Pb] from the lead chromate.

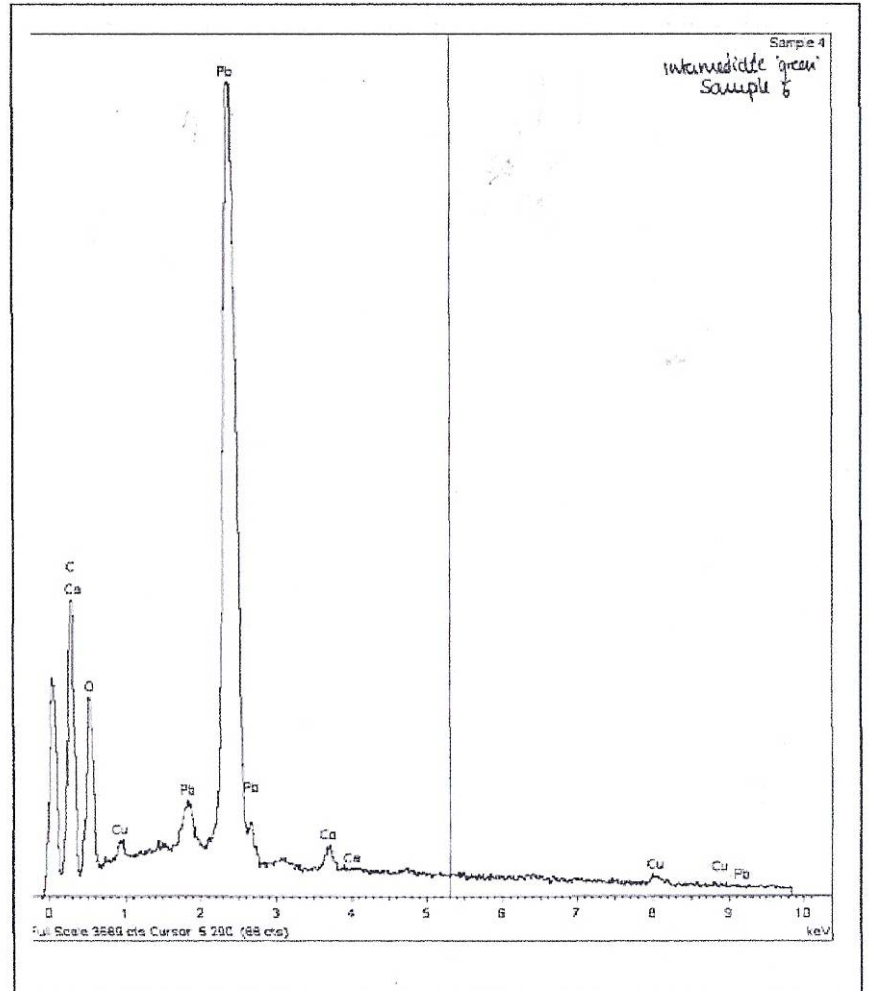


SEM ANALYSIS of a lump of white in the 1903 green seen in Sample 6

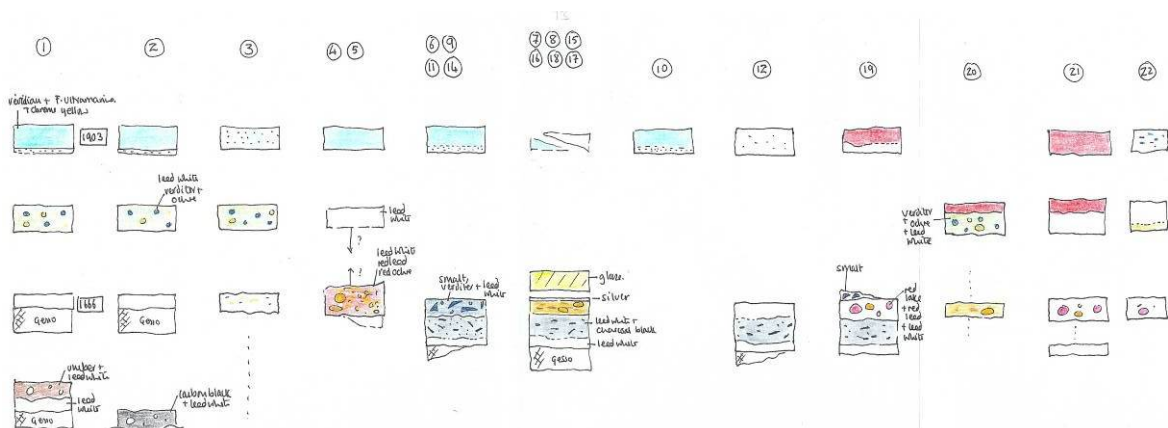
The main features in the spectrum are for zinc [Zn] barium [Ba] and sulphur [S] from zinc sulphide and barium sulphate (lithopone). There is also a significant feature for calcium [Ca]



SEM ANALYSIS of the pale greenish paint used in the intermediate scheme.
 The main feature is for lead, but there is also a small amount of copper [Cu] from the blue verditer.



Diagrammatic summary of paint samples, showing the four decorative schemes and how they relate to each other



11.2 Appendix 2: Location of paint samples



11.3 Appendix 3: Location of cleaning/consolidation tests



11.3 Appendix 3 contd. Details of cleaning/consolidation tests

	Location	Cleaning test	Consolidation test	observations
a)	Glazed silver, lion-headed beast. Photograph 53	X		Dirty but well preserved original decoration. Cleans well
b)	Central heraldic shield. Lion rampant, Turberville arms. Photograph 41	X		1903 red, poorly bound. Remnants of early colour beneath
c)	Base of pediment Photograph 30	X		Grey of surface dirt affects tonality of passages of 'stone' colour. Cleans well
d)	Green ceiling panel with pendant rose	X		Original glazed silver of pendant rose mostly intact. Spots of tarnishing visible. Extensive 1903 green overlying original blue or lying directly on the stone where losses occurred prior to repainting
e)	East female figure	X		Dirt is engrained here. Needs Synperonic A7 and tri-ammonium citrate
f)	Sir Simon, forehead Photograph 15	X		1903 paint poorly bound. Early flesh colour survives well beneath.
g)	East reclining putto, face. Photograph 44	X	X Isinglass	Removal of surface dirt produces dramatic results. Cleaning reveals extensive detachment of paint.
h)	Silver-gilt cherub's head on frieze Photograph 52	X		1903 yellow poorly bound. Cross-section 16 shows yellow undercoat, silver and glaze were cracked and damaged when overpainted. Silver particularly tarnished.
i)	Kneeling girl, front of dress below clasped hands. Photograph 57	X		Beneath surface dirt is 1903 yellow-'stone' colour overlaying red
j)	Cushion below kneeling girl. Photograph 57	X		1903 red poorly bound, fragmentary early red beneath
k)	Winged cherub's head on tomb chest, feather wing and background.	X		Tarnished silver-gilt feather. Background, 1903 green overpaint overlies earlier paler green.

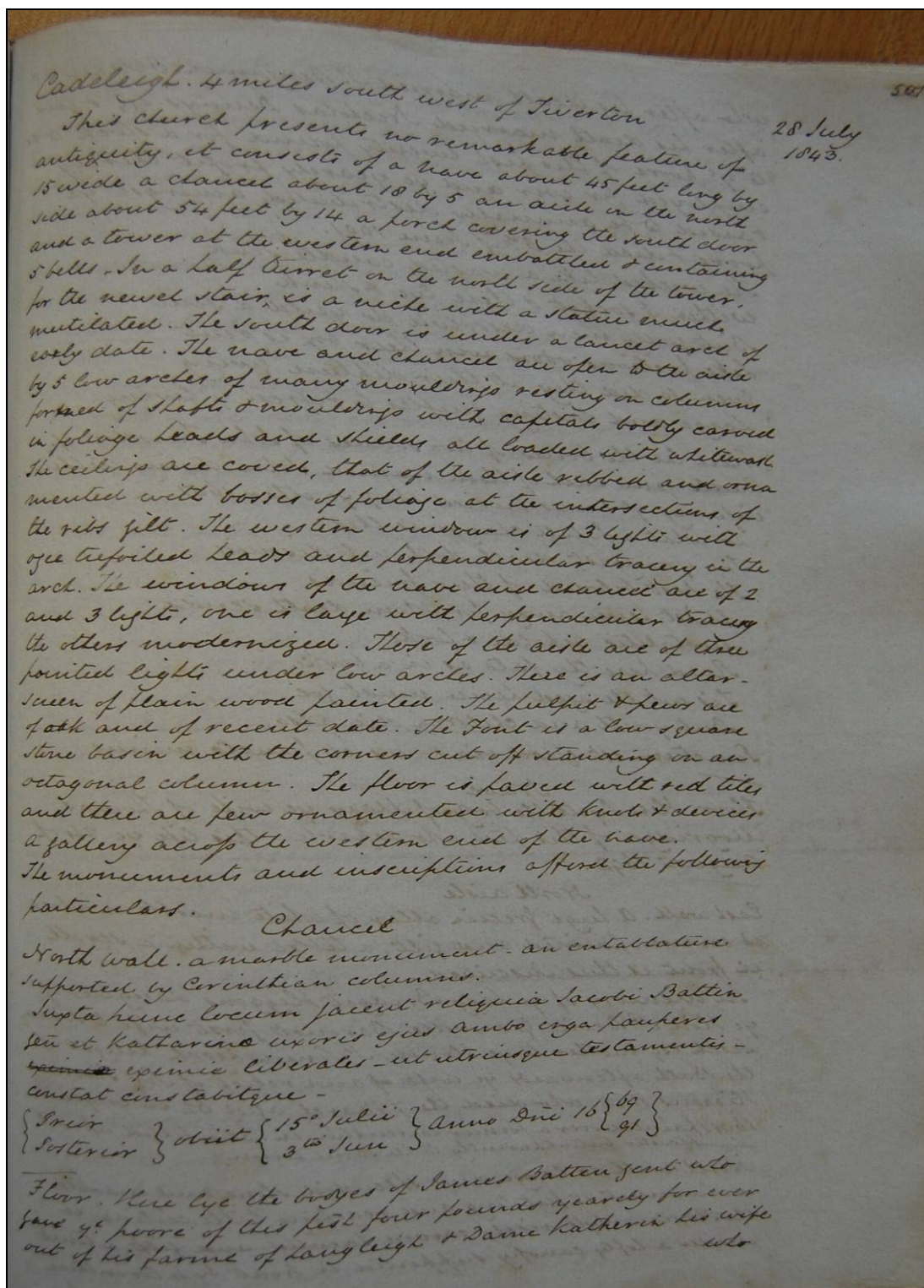
l)	Reclining putto, thigh. Photograph 43	X	X Acrylic dispersion	As test g.
m)	West female figure with serpent. Photograph 51	X	X Acrylic dispersion	Cleaning revealed the serpent to be silver leaf.
n)	West spandrel. Cherub blowing bubbles, cheek. Photograph 34	X	X Isinglass	Removal of uneven deposits of surface dirt produces dramatic results. Cleaning reveals extensive detachment of paint
o)	East face marble tablet, moulded frame	X	X Acrylic dispersion	Extremely dirty, barely accessible and apparently with little paint. Will need to discuss the work here with stone conservators.
p)	East female figure, black marble tablet in pedestal Photograph 48	X		Cleaning black marble and removing overpaint.
q)	East female figure, pedestal	X	X Isinglass	
r)	Lady Bridget Leach, thumb. Photograph 7	X		1903 green, poorly bound. Early flesh coloured paint beneath.
s)	Winged cherub's head Photograph 54	X		Gentle cleaning of uneven dirt deposits reveals poorly bound, easily removed, 1903 yellow with tarnished silver-gilt beneath

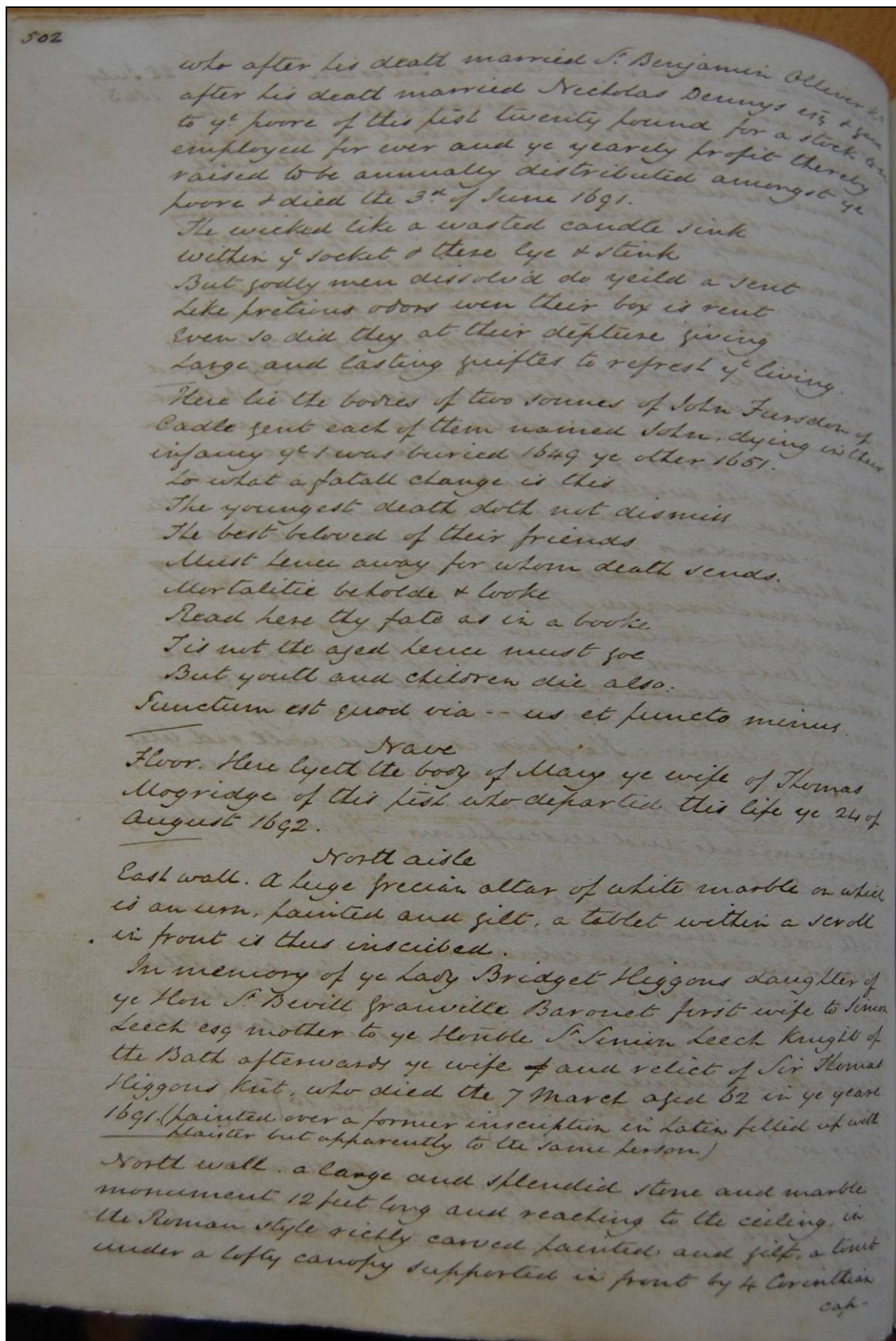
11.4 Appendix 4: Previous Documentation

11.4.1 James Davidson

Pages from 'Church Notes: East of Devon'. Hand written manuscript [c. 1845?]

Pgs 501-503.





503

capitals, the roof and back filled with scrolls figures
cherubs &c. On the tomb lie the recumbent effigies of
a man in armour and his wife in a large ruff; at
their head a man in plate armour kneeling, at their
feet a woman and in front of the tomb 4 males & 5
females all kneeling. At the back, above the tomb is a
tablet thus inscribed Here lye the bodies of S^r Symon
Leach ~~of Crediton~~ knight son of Symon Leach of Crediton
blacksmith and of ye Lady Katherine Leach his wife
daughter of Nicholas Turberville esquier whose true
affection in religious wedlocke caused there desire to
make there bed together in the dust

*Conjunctis a fato cedo incorvatos ad ornam
Sui vita consors fueris ibo comes.*

Tablet on the right side. *Qualteros filius et haeres
Simonis Leach militis medicis occubuit fato
Sitas care pater ceteris mea currit arena
ut possim voti nuntius esse tui.*

Below it
Simon Leach Qualter militis filius et haeres Regis
Caroli secundi exilis assertor strenuus obiit desideratissimus
Jovis 25 Anno Domini 1660 aetatis suae 28
Tertius en sequitur nulli tamen ille secundus.
Socius rarus rarus et ingenio

Tablet on the left side M. S. S^r Simon Leach K^t of the Bath
son of Simon Leach esq^r buried 30 June 1700. Arms
I. Ormine on a chief ^{underneath} gules 3 ducal Coronets or Leach
II. I impaling Argent a Lion rampant gules Turberville
III. I impaling Argent a Saltire engrailed between 4
Cinqueroils or (false)
a shield loose - gy whether belonging to this monument.
Gules 3 Faulchions barwise in pale argent hilted or. Fosse &

Floor lenth ye cliff Sheridge of Squerton
. the 5 day 1846.

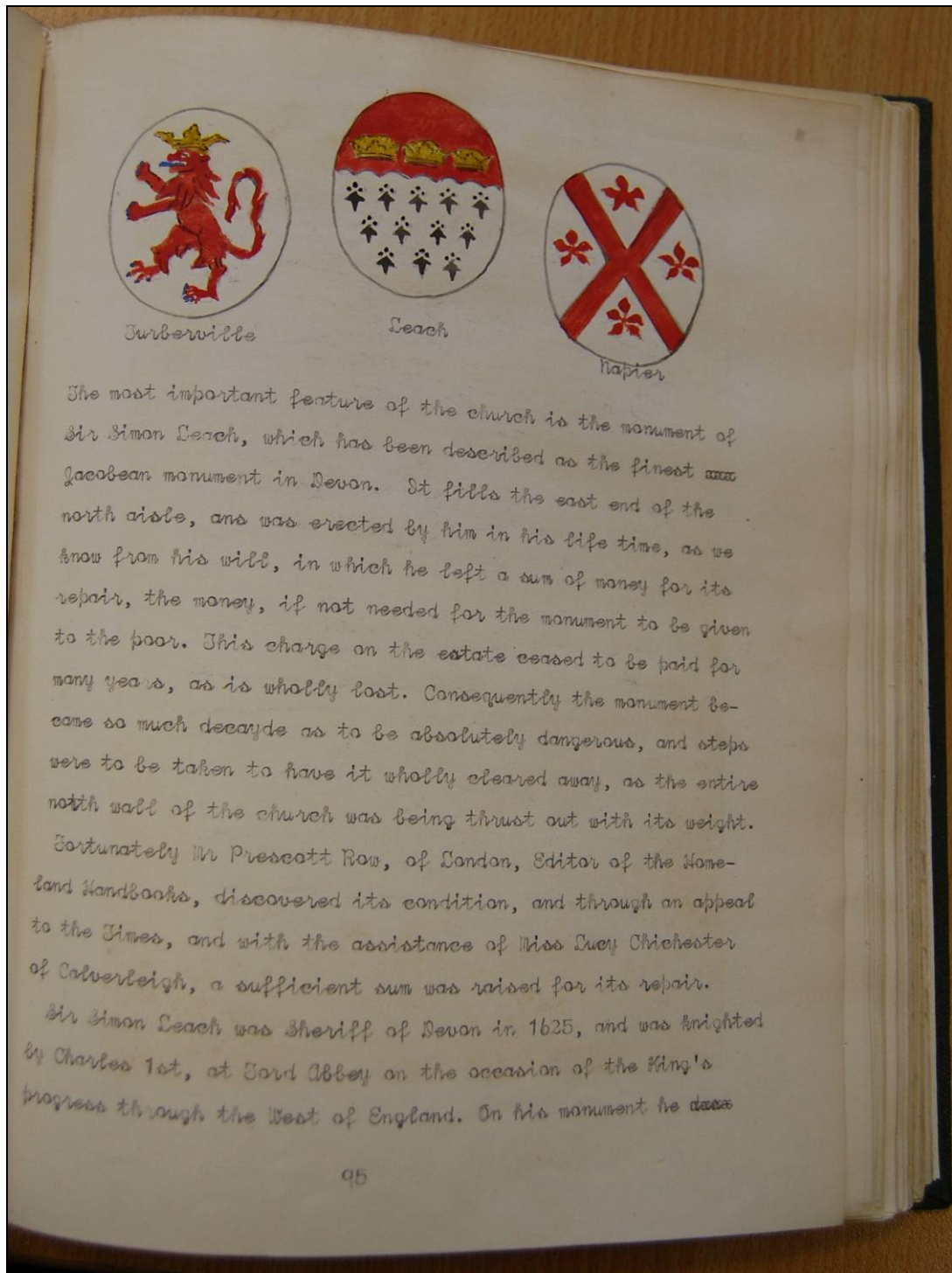
Here lye the body of Eliz^a Helmore wife of Amrose H.
who departed this life the 23 day of November 1570

Here lie the bodies of Tristram & Sarah son & daughter of
Thomas Helmore & Sarah his wife. of this first who departed
this life June 14th 1685

Here lye the body of . . . wife of . . . Helmore of Cadbury
who dep. this life 20 Sept^r A.D. 1695 aged 67.

11.4.2 Beatrix F. Cresswell

Pages from 'Notes on Devon Churches. The Fabric and Features of Interest in the Churches of the Deanery of Tiverton.' From original notes 1905-1919 with revisions and additions. Pages 95-98.



describes himself as "son of Simon Leach of Crediton Blache Smith. The family was of Crediton, and though the origin sounds humble, the Governor's Accounts of Crediton, with their many allusions to Simon Leach, give the impression that he was of no small importance there, probably a Master Smith, into whose hands fell all the important business of this part of the County. In 1588 he was one of the Twelve Governors of Crediton, though he was never appointed Warden of the Corporation. Local tradition accounts for the wealth of the family by saying that Simon the blacksmith made a purchase of bars of iron from the wrecks of the Spanish Armada, and on receiving them found they were bars of gold. His brother John Leach took Holy Orders, and was Chancellor of Exeter Cathedral in 1583.

As already mentioned Sir Simon Leach purchased the manor of Cadeleigh about 1600. It had been recently parted with by the Courtenays, with whom Sir Simon seems to have had much intercourse. In his will he mentions, "my noble god-sonne William Courtenay some & heire of Francis Courtenay of Powderham Castle," to whom he left "w^t to buy him a hunting nagg withall desireing almighty god to make my poor endeavours prosperous to that noble family."

The monument is a high tomb surmounted by a very lofty canopy, decorated with sculptured figures armorial bearings and pendants. On it lies the recumbent figure of the knight, with a lady kneeling at his feet, and his son, in armour, at

his head. Nine children, four boys and three girls are shown kneeling at the base of the tomb. The inscriptions not only record the founder of the tomb, but four later generations; these are painted on tablets under the canopy, and the arms of Leach, Turberville, and Napier, or Napper, are on the top. ¹

Here lye the
Bodues of Sr Symon
Leach Knight son of Symon Leach
of Crediton Blacke Smith and of
ye lady Catherine Leach his wife
daughter of Nicholas Turberville
of Crediton Esquire whose true
affection in religious wedlocke
caused there desire to make there
bed together in the dust

Conjugis a fato cedo incurvatus ad urnam
Tui vita consors funeris ibo comes

Qualterus Leach miles bistas chore pater citius
filius et heres Symonis mea currit arena
Leach militis medius ut possim voti nuntius
occubuit fato esse tui

Simon Leach Qualteri militis
filius et heres regis Caroli secundi
caulis assertor strenuus obiit
desideratissimus Jun 25 Ano Dom
1660

Tertius en sequitur nulli tamen ille
secundus Iudicio rarus, rarus et
Ingenio

Sir Simon Leach Knight of the Bath
Son of Simon Leach esquire
Buried 30th June 1708.

¹ See D N & 2, vol 2, pp 29, 204, "Sir Simon Leach of Cadeleigh"

Below these inscriptions has now been added:-

This monument was restored by Public subscription 1903. W French Rector.

The date of the death of the first Sir Simon was never added to the memorial, the epitaph was probably written during his life. His will was proved 8 April 1637.

When the monument was restored it is a great pity that the work was not superintended by someone with heraldic knowledge, for the armorial bearings have been shockingly treated. There are five oval escutcheons on the canopy, and of these only the arms of Leach are correctly blazoned. The others have been painted either red and ermine, or, worse! red, picked out on a black ground of pale art green. Harry Hems who did the work of the restoration, and regarded himself as an antiquarian, ought to have known better.

The shields display:-

Ermine, on a chief indented gules, 3 ducal crowns or.
Leach.

Argent, a lion rampant gules, crowned or. Turberville

Argent, a saltire between 4 cinquefoils gules. Napper.

Sir Walter Leach, the son of Sir Simon, who predeceased him, married Elizabeth Napper, or Napier, of Bedfordshire.

His son, Simon, married Bridget, daughter of the great royalist Sir Beville Grenville, who after the death of her first husband married Sir Thomas Higgons. A monument to her is at the east end of the north aisle, it was erected by her son, Sir Simon K. B. and formerly had a simple English epitaph

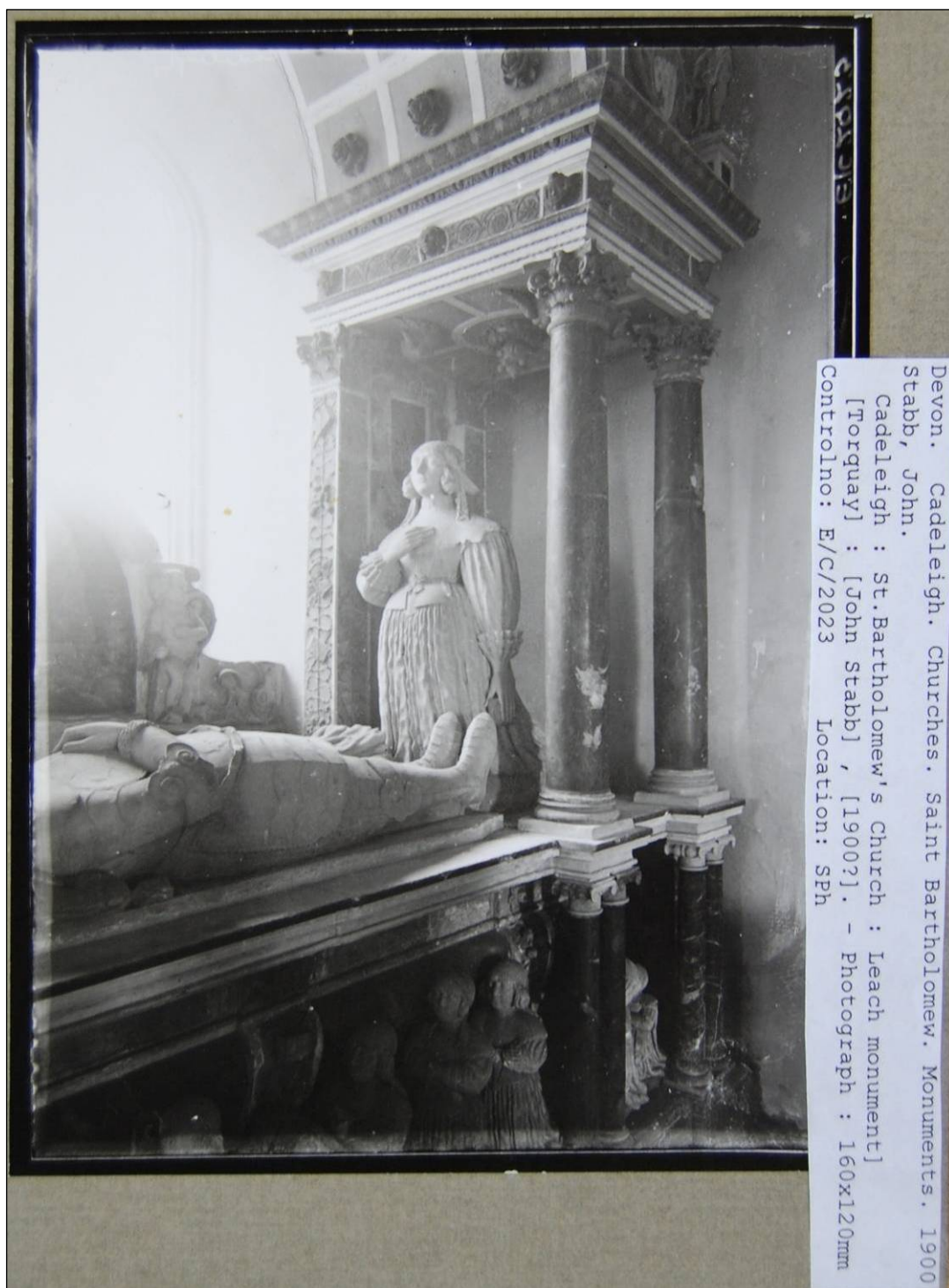
11.4.3 John Stabb

Original photographs used for volume 1 of 'Some Old Devon Churches, their Rood screens Pulpits and Fonts etc' 3 vols pub. Simpkin, Marshall, Hamilton, Kent and Co. London 1908



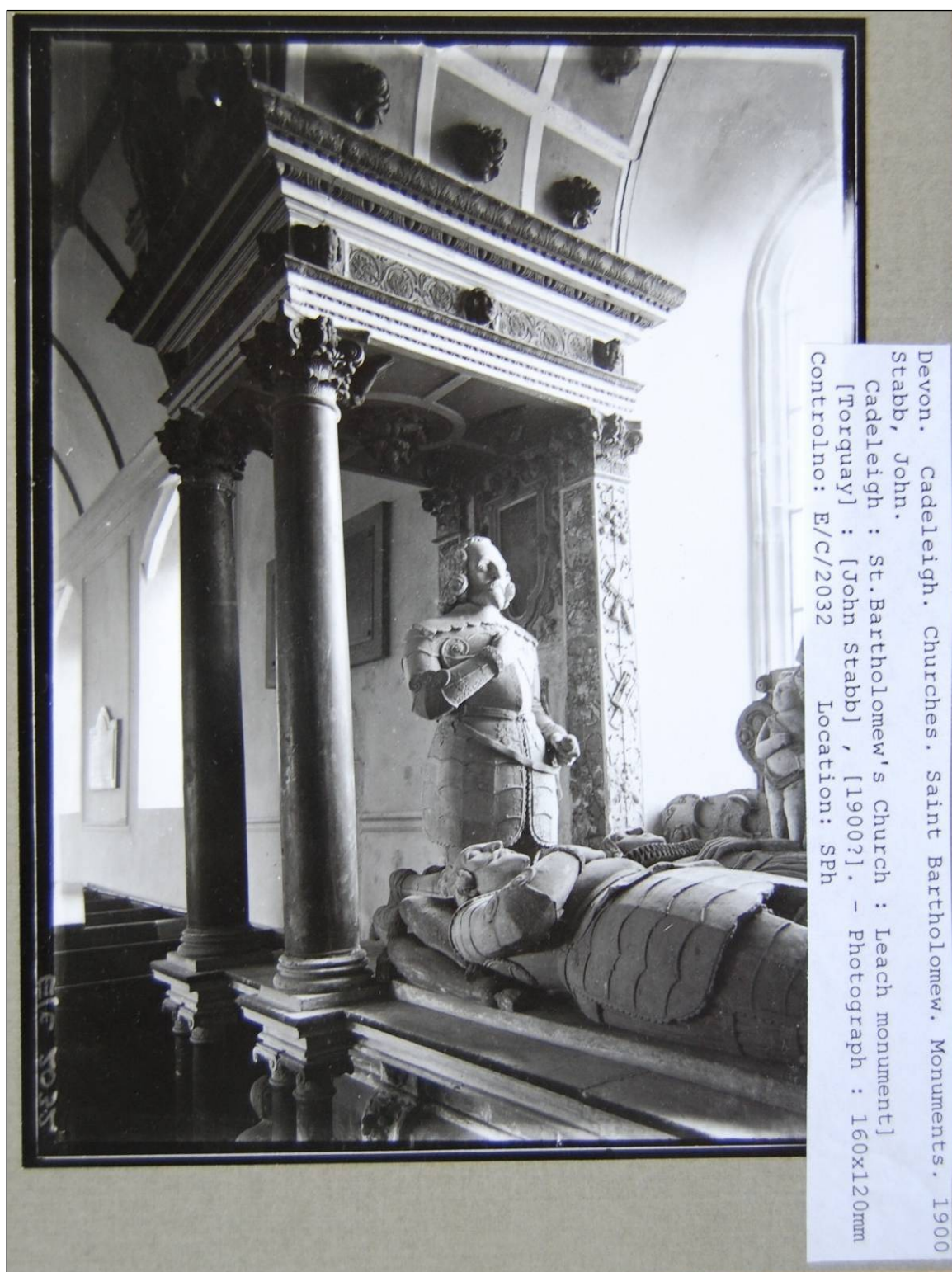
John Stabb (contd)

Original photographs used for volume 1 of 'Some Old Devon Churches, their Rood screens Pulpits and Fonts etc' 3 vols pub. Simpkin, Marshall, Hamilton, Kent and Co. London 1908



John Stabb (contd)

Original photographs used for volume 1 of 'Some Old Devon Churches, their Rood screens Pulpits and Fonts etc' 3 vols pub. Simpkin, Marshall, Hamilton, Kent and Co. London 1908



John Stabb (contd)

Pages 35-39 from volume 1 of 'Some Old Devon Churches, their Rood screens Pulpits and Fonts etc' 3 vols pub. Simpkin, Marshall, Hamilton, Kent and Co. London 1908

P35

CADELEIGH. St. Bartholomew (about two miles from station on Exe valley branch of G.W.R.)- The church is principally worthy of notice for the magnificent monument in memory of Sir Simon Leach, which stands at the east end of the north aisle (see plate 36). Sir Simon and his wife rest on an altar tomb beneath a lofty canopy supported by Corinthian pillars. At the top of the canopy is a coat of arms, on each side of which are cherubs; in the right spandrel of the arch is a figure of Time with his scythe, in the left spandrel is the naked figure of a boy; the ceiling of the canopy is divided into squares, and from the centre of each square hang pendants. Over the compartments at the head and feet of the principal figures are coats of arms, and female figures on pedestals. Behind Sir Simon and his wife is a tablet with an inscription, with figures of small naked boys on each side, and a clothed figure on the top of the tablet. In the left hand compartment, at the head of the principal figures, kneels the statue of a man with long hair, arrayed in plate armour, his left hand grasping the hilt of his sword; in the right hand compartment kneels a female figure with kerchief on her head, arrayed in tight-fitting bodice with lace collar, and long full dress. In front of the monument, at the base, before a prie-dieu in the centre, kneel nine

36 *Some Old Devon Churches.*

figures; four males on the left side and five females on the right. There are inscriptions on the tomb in Latin, of which the following is a translation:—

Bowed down by the fate of my wife I am going to her tomb, her partner in life, in death I will be her comrade.

Walter Leach Soldier
Son and heir of Simon
Leach Soldier,
predeceased him.

Simon Leach son and
heir of Walter Leach a
zealous supporter of
King Charles II. when in
exile, died deeply
regretted June 25th
A.D. 1660.

“Stay dear father my
sands have run now
quickly in order that
I may be able to be the
bearer of your pray-
ers.”

Sir Simon Leach
Knight of the Bath
son of Simon
Leach Esq.
1708.

“To a third generation follows
yet second was he to none
distinguished for his discretion
distinguished also for his talent.”

On the central tablet in English is the inscription:—

Here lye the
bodies of Sr. Simon
Leach Knight, Son of Symon
Leach of Crediton Blacksmith
And of ye lady Catherine Leach
his wife, Daughter of Nicholas
Turbeville of Crediton, Esq
Whose true affection in Reli-
gious wedlock caused there desire
to make there bed together in the dust.

Cadeleigh. 37

The whole monument is carved in white Beer stone with Devonshire marble pillars and enrichments, and is a handsome specimen of monumental sculpture of the Jacobean period. The monument has been restored and on the left panel is the inscription:—

This monument was restored by public subscription in 1903. Rev. W. French, Rector.

From Sir Simon Leach's will it appears he erected this monument in memory of his second wife Katharine who had predeceased him. He appointed one of his sons, Nicholas, and A. Y. . . to be his executors. The will was proved on the 8th of April, 1637, and in 1651 administration was granted to his grandson, Simon Leach.

Sir Simon married twice:

1st, Elizabeth, daughter of Walter Burrough of Exeter, by whom he had two children, both of whom survived him (Sir Walter and a boy who died young).

2nd, Katharine, daughter of Nicholas Turbeville of Crediton (in whose honour he erected the monument); by her he had three sons (youngest Simon) and four daughters.

Sir Simon Leach secured the office of Sheriff of Devon in the year of Charles I. accession, and was knighted at Ford Abbey near Axminster on the 26th of September, 1625, by the King. His son Walter was knighted at Whitehall on December the 3rd, 1626.

Sir Simon Leach died in 1637 and was succeeded by his grandson, Simon, aged 5 years. This Simon married Bridget, daughter of Sir Bevil Grenville, the great Royalist, killed at Lansdowne. Simon died in 1660, aged 28, leaving two children, a

boy named Simon, who succeeded him, and a daughter, Bridget. This third Simon was made Knight of the Bath in 1661. Bridget Leach's second husband was Sir Thomas Higgons, and she lies buried in Cadeleigh church. This splendid monument commemorates four generations of the Leach family who lived during the reigns of James I., Charles I., the Commonwealth, Charles II., James II., William III., and Anne. The following inscription was on top of the present inscription on the monument of Bridget Higgons till 1900, when the Rev. Prebendary Granville had it cleaned off and the old inscription restored by Mr. Hems of Exeter :

In Memory
of ye Lady Bridget
Higons Daughter of
Ye Hon Bevill Gra
nvill Baronet, first
wife of Simon Leach
Esq, Mother of ye Hon Sr
Simon Leach Knight of
Ye Bath afterwards
Ye wife and Relict of
Sr Thomas Higons
Knight
Died ye 7th day of March
1691

The present inscription is as follows in Latin:—

Sacred to the Memory
Stay thy foot——O Reader
May the earth, I pray be light
It is no common dust on which you tread
But the revered ashes
of Lady Bridget Higons

Under many names worthy of your respect
She was the daughter
Of the famous Bevill Granville
Knight and true Cavalier
The sister
of the Most Illustrious Earl of Bath
The Wife
of the noble Simon Leach Esq
The Mother
of Simon Leach Knight of the Most Noble Order
Of the Bath——lastly
The Wife and Relict
of Thomas Higons Knight.
A splendid example of high birth and distinguished
character
Now she — who was all this — is ashes only
Awaiting
On Earth the Resurrection—in Heaven her Reward

She died on the 7th day of March aged 62
In the year of Salvation 1691

In 1903 two life-size figures of St. Bartholomew (to whom the church is dedicated), were discovered plastered over on the tower, one on the south side, the other on the north, about 40ft. from the base of the tower. Query: were they plastered over in the time of the Commonwealth to prevent them from being destroyed?

The church dates from the early part of the 15th century.

The register dates from 1665.

Cadeleigh Church - The Rev^d W. French
 E. A. Harbottle Esq^r: F.R.S.B.A. and Son - Architects
 IN A/C WITH
LUSCOMBE AND SON, LIMITED.

Monument of Sir Simon Leach

1903
 August
 September

To the estimated cost of carefully taking down the shattered monument excavating ground & reconstructing foundation from a solid bottom in concrete. Carefully rebuilding the monument with all necessary copper cramps, dowels, lugs &c reficing the fragments broken off & making good to floor &c

62.10. -

the estimated cost of taking down the North wall at East end where fractured and leaning out from North East angle and around on East wall to fissure - collaring up the roof. Taking down & rebuilding the wall & making good the plastering inside resetting the window reficing glazing &c & making good after

28 . .

the estimated cost of repairing the plastering over East window of Chancel, repairing broken flagging stopping in remainder setting up repairing door into Chancel - stopping in under wall plate,

Rest on £ 90. 10. -
 repairing cement top of plinth
 painting exterior wood & ironwork
 and fixing shoe to down pipe in
 angle - pointing stonework around
 down pipe, pointing ridge and
 repairing slates & forming cement
 gutter. WJ 3. 4. -

To renewing broken glazing to windows
 on S.W. and N sides of Church and
 repairing slating of base roof -
 erecting ladders & renewing plastering
 & opening up sculptured niches on
 North & South sides of the tower &
 cementing open joints to cause
 excavating ground against North
 wall of the Church & forming cement
 concrete gutter & carrying with
 socketted pipes to the roadway 1. 16. -

filling up the vault under the
 Monument found to be in a very
 defective condition with rubble
 stone & concrete to prevent subsidence
 & keying up to paving of floor of Church 5. 10. -

& keying up to paving of floor of Church 1. 8. -

£ 102. 11. -

1903
 Oct 14

345 Oct 14/13
 Received for 52/9c
 Luscombe & Son,
 Limited
 With best thanks

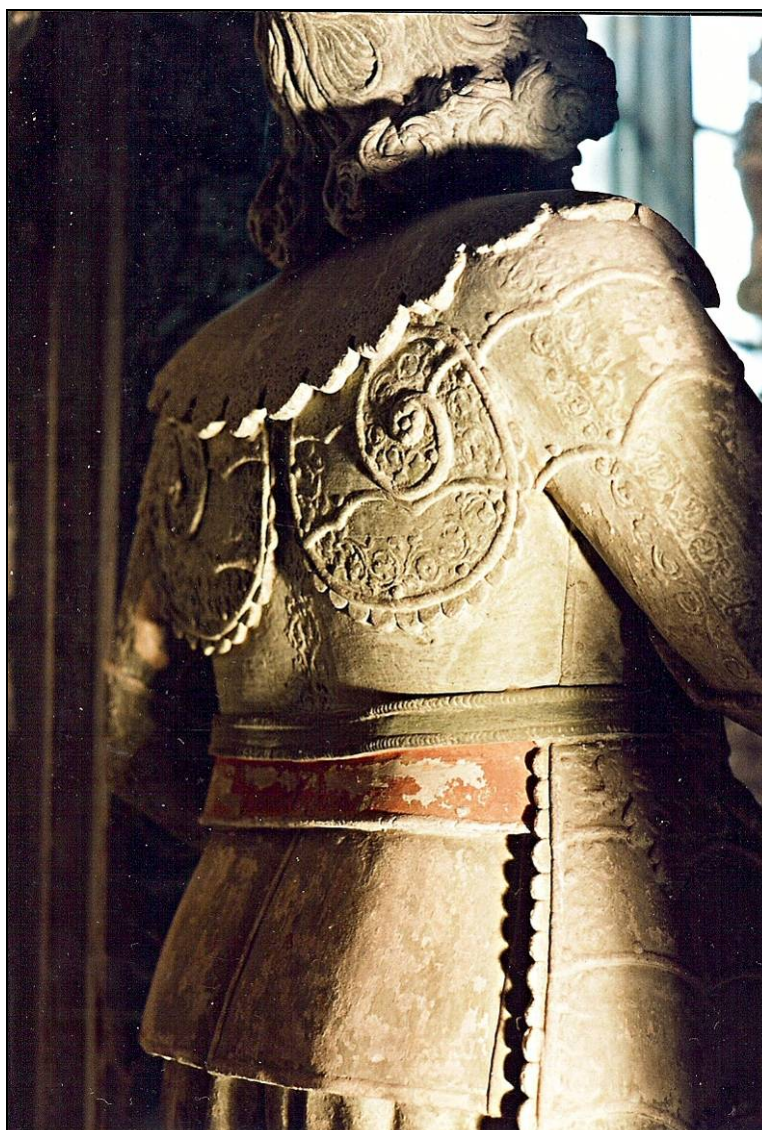


Luscombe 95 - -

Balance £ 4 11 -

11.4.5 Kneeling Simon Leach. Wells Conservation Ltd, 1994 Report.

Kate Anstead, Christina Kaye and Nick Durnan.



A comparison of this photograph with photograph 11 in the current report shows that there have been further paint losses on the red border below the belt, revealing a little more of the dark grey of the armour from the 1660 decoration and the buff-coloured layer above. The flaking, although continuing, is happening gradually. Photograph 13 shows a closer view of the area marked in the box above which indicates that approximately a further 2cm of the red has been lost since 1994.

The red is actually from the intermediate scheme although above this there are fragmentary traces of 1903 red in the corners

11.5 Appendix 5: Other Devon Monuments

11.5.1 The Bouchier Monument, Tawstock, Devon



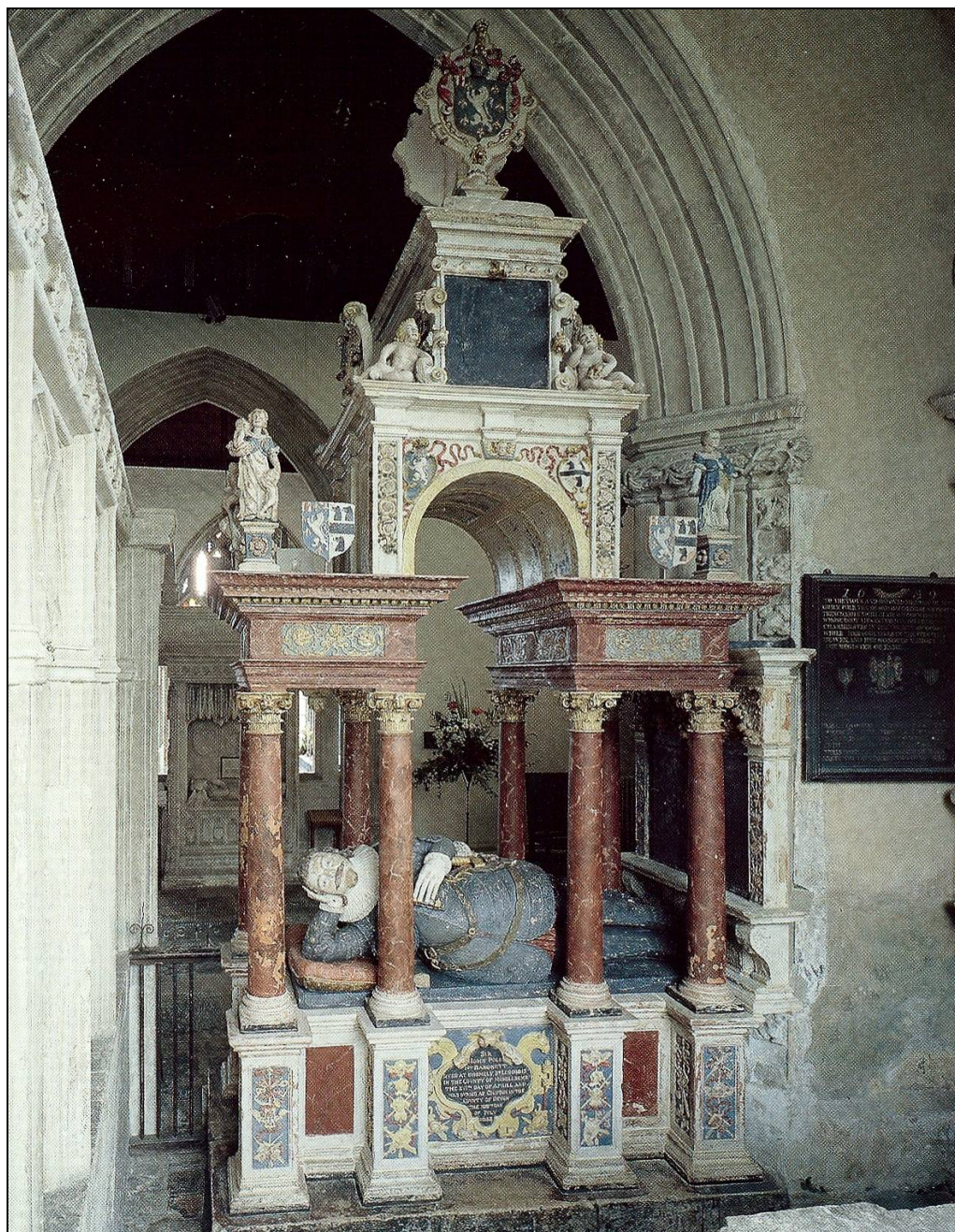
The decoration on this monument is very similar to that on the Leach monument, although the Bouchier monument is carved from alabaster and not Beer stone and dating from 1623, it is slightly earlier in date. It appears to have received more interventions than the Leach monument with obvious and obtrusive repainting, perhaps several times over the centuries.

11.5.2 Monument to Sir Francis Chichester, Bishop's Tawton

The paint on many 17th century monuments has been neglected. At Bishop's Tawton, the Chichester monuments are especially obscured with dirt. The monument to Sir Francis Chichester d. 1698, shown on the right, displays features such as the caryatids that could still retain their original paint. The paint on other elements, such as the heraldic devices and frieze looks like overpaint.



11.5.3 The Carewe-Pole Monument, Colyton, Devon



The monument to the Carewe-Pole family dates from 1630-40 and is of polychromed Beer stone, as is the Leach monument. Although there is also overpaint here, it is more subtle than that used on the Bouchier monument (see 11.5.1 above). Cleaning tests carried out by Anna Hulbert in 1976 revealed two layers of overpaint, with the more recent and inferior decoration only partially applied, thereby incorporating some of the earlier scheme. In this way the appearance of the overpainted Carewe-Pole monument today is not dissimilar to the appearance of the Leach monument with its combination of original paint and overpaint.

12. Illustrations

Number	Digital Photo	Caption
1.	June 2008DSC_0037	1. Location and view of the Leach monument, Cadeleigh, June 2008.
2.	October 2007DSC_0010	2. The Leach Family monument, 1660. October 2007.
3.	October 2007DSC_0012	3. View from the south west: the attic. October 2007
4.	October 2007DSC_0039	4. View of underside of west canopy, with capitals. The paint can be seen to be extensive, with minimal losses. October 2007
5.	October 2007DSC_0051	5. Underside of east canopy. There is an almost intact paint surface here. Most of what is visible dates from 1903 restoration but some of the 1660 decoration is exposed. October 2007
6.	June 2008DSC_0007	6. Lady Bridget Leach wife of Sir Simon Leach, grandson. General view. June 2008
7.	March 2008DSC_0119	7. Lady Bridget Leach; close-up showing extensive 1903 flat colour with the 1660, naturalistic painting of the face with its rosy cheeks and painted irises, visible through losses. March 2008
8.	March 2008DSC_0132	8. Lady Bridget Leach: close-up of dress. Losses in the 1903 green reveal the 1660 scheme. The dress was originally painted in a mix of red lead, red ochre and lead white. March 2008
9.	March 2008DSC_0137	9. Lady Bridget Leach: close-up of dress from the back, as in photo 8. March 2008
10.	June 2008DSC_0017	10. Sir Simon Leach, kneeling, seen from the south. General view. The polychromy here is largely monochrome, with the pale green of the 1903 decoration covering much of the figure. Where it has peeled away a pale grey undercoat is visible and occasionally the dark grey of the armour from the 1660 scheme. June 2008
11.	March 2008DSC_0164	11. Sir Simon Leach, kneeling, seen from the back. General view. The red on the band below the belt is not original. March 2008
12.	October 2007DSC_0022	12. Sir Simon Leach, kneeling. The 1903 decoration is extensive but powdery. Most of the paint losses occur on the south side, away from the window, accessible to damage from human contact. October 2007
13.	March 2008DSC_0160	13. Sir Simon, kneeling: detail of red edging of his armour. The red of the 1903 decoration is fragmentary here. Most of what is visible is from an intermediate, partial repaint. The grey of the armour from the 1660 scheme is revealed. Compare this photograph to that shown in Appendix 4.6 from 1994. Although not deteriorating fast the area of loss has increased in the past twenty years. March 2008

14.	March 2008D5C_0170	14. Sir Simon, kneeling: detail of head and extensive 1903 paint. Paint is very powdery here as can be seen where dribbles have washed channels through the paint. There is no indication of what might be the cause of this but it does not represent a problem noted elsewhere. Given that the monument is decorated at times with plants, perhaps these were sprayed on an occasion. March 2008
15.	March 2008DSC_0187	15. Sir Simon, kneeling: close-up of face. 1660 paint is visible through losses in the 1903 decoration, with the eyes particularly arresting. Cleaning test on forehead, seen from the east, shows how dirty the surface is. Poorly bound paint comes away with gentle swabs of de-ionised water. March 2008
16.	March 2008DSC_0184	16. Sir Simon, kneeling: detail of flaking paint on his hose. March 2008
17.	March 2008DSC_0094-	17. Detail of the earlier effigy of Simon Leach, showing how extensive the surviving decoration is. On the armour, much of the 1660 colour is exposed where the 1903 scheme has flaked away. However, badly flaking paint on the cushions is revealing expanses of bare stone, as the flaking 1903 paint appears to have pulled the lower paint layers away from the stone. March 2008
18.	March 2008DSC 0093	18. Sir Simon: close-up of armour. Much of the green 1903 paint has flaked away here revealing the dark grey of the 1660 scheme. March 2008
19.	June 2008DSC_0036	19. Effigy of Sir Simon Leach: closer detail of armour showing flaking 1903 paint and earlier scheme beneath. June 2008
20.	March 2008DSC_0096	20. Detail of head of Simon. Note the naturalistic painting revealed on the face from the exposed 1660 decoration. A cleaning test here revealed that the 1903 paint is poorly bound and easily removed with the gentlest of cleaning. March 2008
21.	March 2008DSC_O 101	21. The effigy of Sir Simon seen from the west, showing how extensive the paint is in this protected angle. However, a close examination reveals how precarious some of this paint is (see also Photograph 22). March 2008
22.	March 2008DSC_0109	22. Detail of top of head of effigy of Sir Simon. Much of the thick build-up of paint here is detached from the stone support and is in urgent need of attention. This is the location of paint sample 1 (Appendix 1). Analysis of this has revealed four paint schemes, the original brown of the hair belonging to a scheme employed when the effigy was in its original location before the present monument was erected. This sample also showed evidence of an intermediate decoration before the 1903 repaint. March 2008

23.	March 2008DSC_0099	23. Detail of paint on the cushion below Simon effigy. Paint sample 6 taken from here (Appendix 1), revealed that the original blue is mostly smalt, with a little blue verditer. The 1903 decoration is a complex mix of Prussian blue, viridian, French ultramarine, carbon black and zinc white. March 2008
24.	March 2008DSC_0103	24. Lower cushion beneath the head of Sir Simon: paint is very detached here and large expanses of bare stone have been exposed. Such areas are very vulnerable as being easily accessible and more losses will continue to occur if conservation is not carried out. March 2008
25.	June 2008DSC_0073	25. Detail of cushion below head of the recumbent Simon. As can be seen along the right hand side, the problem of detaching paint is ongoing. June 2008
26.	March 2008DSC_0003	26. View of effigies of Sir Simon and Lady Katherine Leach. March 2008
27.	March 2008DSC_0004	27. Close view of effigies of Sir Simon and Lady Katherine Leach. March 2008
28.	June 2008DSC_0077	28. Lady Katherine Leach: close-up showing condition and extent of surviving paint. There is much detachment of paint here and evidence of new losses. June 2008
29.	June 2008DSC_0076	29. Detail of flaking paint on cushion beneath the right shoulder of Lady Katherine Leach. June 08
30.	June 2008DSC_0040	30. Attic, view of central heraldic shield and reclining putti. Rectangular cleaning test is visible on the white frieze below the shield (see detail in Photograph 38). June 2008
31.	March 2008DSC_0007	31. East spandrel with winged figure of Father Time. Most of the surface retains painted decoration. The paint on the figure itself is particularly loose. March 2008
32.	March 2008DSC_0009	32. Winged figure of Father Time: detail of wing with original silver-gilt decoration. Yellow glaze has largely discoloured but in corners it still gives the appearance of gold. March 2008
33.	March 2008DSC_0016	33. Father Time: detail with skull showing how variable the condition of the silver-gilt is. Small losses are in evidence showing the white stone beneath. The 1903 green in the background is extensive with the 1660 blue visible along the top. The surface is extremely dirty. March 2008
34.	March 2008DSC_0142	34. West spandrel figure blowing bubbles: cleaning test on cheek. The stone coloured paint of the figure cleans well with de-ionised water. Test on cheek. March 2008

35.	March 2008DSC_0026	35. Detail of entablature. Where the blue background has been lost the tarnished silver is exposed. It was obviously quicker for the craftsmen who decorated the monument to cover large areas with the silver and block them out with an opaque background colour rather than confine it to complex ornate carving. March 2008
36.	March 2008DSC_0035	36. Winged cherub's head with extensive surviving silver-gilt and exposed stone where the decoration has flaked away or the stone has sustained some damage. The abrasive nature of the dust and sticky cobwebs will not be doing the fragile surfaces any good. March 2008
37.	March 2008DSC_0090	37. Central section of attic entablature, showing context of cherub's head (see Photograph 36, above). Plaster fills in the stone joints are covered with 1903 paint. March 2008
38.	March 2008DSC_0047	38. Cleaning test on the frieze, below central heraldic shield. Plaster fills with overpaint date from 1903. March 2008
39.	March 2008DSC_0030	39. Cleaning test on west canopy entablature. March 2008
40.	March 2008DSC_0042	40. Detail of scrolled plinth below central heraldic shield. Tests showing removal of overpaint. Below the yellow of the 1903 repaint lies the glazed silver leaf which is applied to a grey ground, as has been exposed in these tests. March 2008
41.	March 2008DSC_0043	41. Cleaning test on the haunch of the Turberville lion rampant, on the central shield. Gentle cleaning of surface dirt, with de-ionised water, removes much of the powdery 1903 red. The 1660 red beneath is made up of red lead, red lake and lead white. This red layer is pale in colour as the red lake has faded. March 2008-
42.	March 2008DSC_0046	42. Central heraldic shield: close-up of flaking and powdering overpaint on mantling. A heavy deposit of dirt and cobwebs coats all surfaces at this height. March 2008
43.	March 2008DSC_0050	43. East reclining putto, adjacent to central heraldic shield. Overview. March 2008
44.	March 2008DSC_0071	44. East reclining putto: west side of face has been partially cleaned, using de-ionised water. It was necessary to consolidate loose paint revealed during cleaning. Stains on the bare stone will need further treatment. March 2008
45.	March 2008DSC_0055	45. Reclining putto: right arm, showing pencilled graffiti and severely detaching paint. March 2008

46.	March 2008DSC_0151	46. West side of panelled ceiling with pendant pineapples. The two paint schemes can be seen clearly here, with the extensive covering of 1903 green overlying the original blue. The condition of the paint varies considerably; in places the original blue retains its blueness whilst elsewhere it has altered to green. March 2008
47.	March 2008DSC_0192	47. West side of panelled ceiling and entablature beneath. Note how extensive the painted decoration is. March 2008
48.	March 2008DSC_0076	48. East female figure, with extensive 1903 paint. New losses revealing the white Beer stone beneath. March 2008
49.	March 2008DSC_0079	49. East female figure: close-up showing flaking and crazed paint layers, with thick build-up of paint in the corners of the carving. 1903 redecoration is smeared over the bare stone where losses have occurred. March 2008
50.	March 2008DSC-0088	50. West female figure with serpent: overview, with extensive 1903 paint. March 2008
51.	March 2008DSC_0089	51. West female figure with serpent: detail of cleaning test and 1903 overpaint on serpent. Cleaning reveals that the serpent was decorated with glazed silver in the 1660 scheme. Some detached paint in evidence. March 2008
52.	March 2008DSC_0085	52. Winged cherub from west canopy entablature: cleaning test. Poorly bound 1903 paint comes away with gentle swabs of de-ionised water revealing 1660 tarnished silver-gilt beneath. March 2008
53.	March 2008DSC_0139	53. Detail of west armorial bearing: cleaning test on lion-headed beast. March 2008
54.	March 2008DSC_0039	54. Cleaning test on the forehead of the central cherub, beneath central shield. The softness of the 1903 paint makes it vulnerable to air born dirt which has become ingrained. Surface cleaning results in the removal of 1903 yellow, exposing the tarnished glazed silver of 1660. March 2008
55.	October 2007DSC_0043	55. Kneeling girls, around the sarcophagus, looking east. The paint here is flaking badly and is in urgent need of attention. The 1903 paint is flaking, exposing patches of 1660 paint, such as the rosy cheeks, as well as much bare stone. This low level area of the monument is particularly accessible to damage. The figures themselves are loose, with elements such as hands and heads able to be detached. October 2007
56.	October 2007DSC_0044	56. Kneeling children, looking west. As photograph 55. The hands of the female figure are detached and resting, rather than secured, on the sculpture. October 2007

57.	March 2008DSC_0127	57. Two of the kneeling girls. As photograph 55. The figure in the foreground has a loose head and is also loose at waist level, whilst the child behind is loose at the base. Cleaning test on the front of the dress of this child. March 2008
58.	October 2007DSC_0046	58. Kneeling girl, 2 nd from prie-dieu: close-up of paint between knee and cushion which is badly lifting. October 2007
59.	October 2007DSC_0048	59. Detail of head of one of the kneeling boys. Flaking and brittle 1903 paint reveals the rosy cheek of the 1660 scheme. October 2007
60.	March 2008DSC_0014	60. Detail showing cleaning test on east pilaster, attic level. Flaking 1903 paint and cleaning reveal the tarnished glazed silver of 1660, with some pockets of untarnished, unglazed silver which will eventually need to be protected. March 2008.
61.	August 2008DSC_0026	61. The pilaster west of the window has at some stage suffered from damp penetration, but the indications are that this is historic, the problems have been addressed and that the environment is stable. August 2008