THE ROYAL ARMS IN BUCKINGHAMSHIRE CHURCHES

ELLIOTT VINEY

William Bradbrook's pioneer article on 'The Royal Arms in Churches' appeared in Records, XI, 7, 384–400, in 1926. The last fifty years have witnessed a growth of interest in the fittings of parish churches and a survey of the position to-day may be of interest. Bradbrook described forty-three Royal coats of arms which he had seen and mentioned three more — Chearsley, Datchet and Great Linford — which he had been unable to visit; nevertheless he seems to have missed another thirteen which probably existed at the time although some of these may have been hidden in vestries and not on display in 1926. They were Barton Hartshorn, Biddlesden, Chalfont St. Giles, Great Kimble, Hardwick, Hartwell, Hedgerley, Hitcham, Lacey Green, Little Missenden, Pitstone, Shenley and Wooburn. He could not have known of the earlier example at Chearsley discovered under whitewash since his day, nor the eight modern sets at Amersham, Bledlow, Chalfont St. Peter, Fulmer, Haddenham, St. Leonards, Swanbourne and Thornton. However at least five which he did record — Foscott, Lavendon, Marlow, Stewkley and Stoke Hammond — appear to have been lost. The arms he saw at Towersey have also gone although the parish was transferred to Oxfordshire in 1933.

It is not necessary to repeat Bradbrook's admirable survey of the use of the Royal arms in English parish churches; it will be sufficient to say that although their display was encouraged from the time when the Monarch became the head of the Established Church, it was only made compulsory in 1660. There is no doubt that every church did display them until the mid-nineteenth century but they were considered incongruous by many of the zealous incumbents who restored and altered so many churches from 1850 onwards. Many must have been deliberately removed in the seventy-five years before Bradbrook made his list in 1926; in 1845 there were two hundred parish churches in Bucks. and assuming they all displayed arms in that year then over one hundred and fifty must have been removed or destroyed by the time Bradbrook compiled his list.

In the list below Bradbrook is B. throughout; B.393 refers to the page number in his article. The list is alphabetical rather than grouped in reigns. Lost arms are enclosed in brackets. Measurements are in feet, the horizontal measurement being given first. For those who recognise the 1974 boundary changes Datchet, Langley Marish and Upton are now in Berkshire but happily remain for ecclesiastical purposes in the Archdeaconry of Buckingham.

I acknowledge much help received from Dr. A. E. M. Hartley of Fawley and Mr. Clive Rouse.

AMERSHAM

Elisabeth II. 1975. Not in B. By S. door. 2½' x 2½'. Plaster and painted. Cast and erected to celebrate the Queen's Silver Jubilee from a mould at Windsor Castle made for the 1953 Coronation.

ASTWOOD William IV. (1830-37). B.398. Over chancel arch. 4½' x 4½'. Painted on canyas.

BARTON Victorian. Not in B. On W. gallery, 2' x 2'. Cast iron, painted black in bas-relief.

BIDDLESDEN George I. 1723. Not in B. On N. wall near gallery. 3' x 3½'. Painted on boards. 'Restored' to the church in 1937. The church was built in c. 1730 as part of the stable block of Biddlesden House, so the arms probably first hung in St. Margaret's Chapel, the last remaining portion of Biddlesden Abbey, which served as the parish church until destroyed by Henry Sayer when he rebuilt the house.

BLEDLOW Elisabeth II. 1952. Not in B, On W. tower screen. 4½ x 3½. Painted on wood by C.O. Skilbeck, a well-known local antiquary who lived in the village. Erected to commemorate the Queen's accession.

BLETCHLEY Anne (1702-07). B.393. Over N. door. 4' x 4'. Carved in dark oak and uncoloured. As B. suggests they were probably part of the wood furniture (screen, altar etc.) with which Browne Willis adorned the church 1704-07; the 'Semper eadem' motto was usual in Anne's reign.

BRADWELL Stuart (Before 1689 or 1702-07), B.392. Over N. door, 1¼' x 1½'. Carved in wood and painted. B. records them as unpainted but the missing hind leg of each supporter which he noted has not been replaced.

BUCKINGHAM George III. (1760-1801). B.395. On W. gallery, 2¼' x 1¼'. Carved in wood and painted. B. records them as gilded and in the vestry, but they were restored, repainted and placed in their present position in 1962. There is no lion on the crest. They probably date from the building of the church on the site of the former castle in 1780.

CALVERTON ? Edward VII. B.399. Over tower arch. Carved in wood and coloured, all within a quatrefoil but without supporters, mantling or Garter; below, and on scroll 'Fear God and Honour the King'. The latter would seem to imply a date after the death of Queen Victoria although the general style would be compatible with the restoration of 1870.

CHALFONT George III. 1812. Not in B. On E. wall of tower. 4' x 4'. Painted on canvas with black frame; at base 'B. Buckmaster. H. Bradshaw. Churchwardens.' Reinstated in recent years.

CHALFONT Elisabeth II. 1966. Not in B. Over W. entrance. 4' x 4½'. Carved and painted. Made from old pews by Dr. Colin Smithells. The motto forms the base of the design.

CHEARSLEY 1 Hanoverian. (1714–1801). Not in B. On N. wall. 6' x 7'. Painted on wall. These fine arms were discovered under whitewash during restoration in the 1950's and were repainted by M. C. Farrar Bell. They have an elaborate surrounding design on a sepia background with rounded corners. (Plate IVa).

CHEARSLEY 2 Hanoverian. (1816-37). Not in B. On W. gallery. 2½' x 2½'. Painted in gold on a black background. No helm or mantling. The faces of the two supporters are exceedingly curious.

CHENIES Modern. (After 1837). B.399. Over chancel arch. 4' x 4'. Painted on canvas with blue background and black and gilt frame. B. puts them as Victorian but local opinion asserts that they were erected by an 'Erastian' Rector in Edward VII's reign.

CHETWODE William III. (1689-1702). B.391. Over arch to N. chapel. 3½' x 3½'. Painted on wood panels with yellow, irregular frame. B. evidently missed the Nassau escutcheon, as he classified these arms as Stuart.

CHILTON Hanoverian. (1714-1801). B.394. On N. wall. 5¾' x 6'. Painted on canvas, black frame. Repainted by John Piper 1966 and moved to present position.

CLIFTON George III. 1806, B.396, On N. wall of tower, 7¼' x 6'. Painted on wooden panels with black and gilt frame, B. comments: "Well painted and a very fine example".

CUBLINGTON George II. 1743. B.395. On N. wall of tower. 64' x 64'. Painted on wooden panels with an attractive carved and gilded frame.

DATCHET Charles II. 1683. Not in B. Over inner porch of S. door. 3½' x 2½'. Carved in wood in high relief, incorporating the date and gilded. Its reinstatement was noted by E. C. Rouse in *Records*, XVII, 207. A unique and splendid example. (Plate IIb).

FINGEST Anne. (1707-14). B.393. On N. side of nave. 4' x 3'. Painted on canvas. 'Semper eadem' motto. Curiously B. stated categorically that "no specimens exist in this county" of the 1707-14 arms of Anne. Perhaps they were difficult to see (they were in the tower in 1926) or they may have been repainted. (Plate IIIb).

(FOSCOTT) The Hanoverian arms recorded by B. (394) in this now redundant and shamefully derelict church have disappeared.

FULMER

James I. c. 1610. Not in B. Over N. door, 2½' x 2½'. These fine arms were one of many armorial panels on the roof of the Old Library at Christ Church, Oxford. A circular achievement surrounded by strapwork. No supporters or motto but the Garter ribbon is included. Crest has crown without lion. Given to the church by the college through E. C. Rouse, who also restored the panel, in 1960. This was a most appropriate addition to what is essentially a Jacobean church.

GAYHURST George II. 1731. B.392. Over chancel arch. Carved in wood. As B. points out these arms must have been in the previous church before the rebuilding of c. 1730 as they are basically Stuart arms incorrectly updated — the fourth quarter has only the Westphalian portion of the arms of Hanover.

GREAT Hanoverian (1714–1801). B.394, W. end of S. aisle. 4' x 3', Painted on canvas with wide black frame, Formerly in chancel.

GREAT KIMBLE Modern. Not in B. Over S. door. 14' x 1'. Recently restored and repainted.

GREAT LINFORD B. (400) states that "Royal arms have recently been discovered painted on the chancel arch but entirely concealed by the later plaster ceiling". Presumably they still survive.

GREAT MISSENDEN Hanoverian (1714-1801), B.394, Over tower arch. 2' x 2'. Carved in wood and gilded.

HADDENHAM

Elisabeth II. 1953. Not in B. Over N. door. 4' x 3½'. Painted on aluminium in black frame. E II R above each supporter. Crest is Imperial Crown without lion. Painted by M. C. Farrar Bell (of Haddenham) and installed to mark the Queen's Coronation.

HANSLOPE

William IV. (1830–37). B.398. Over chancel arch. 5½' x 5½'. Painted on canvas. The extraordinary second quarter noted by B. – a blue lion over a scatter of hearts instead of the normal Scottish coat – has not been corrected in the intervening years. The arms are flanked by hatchments of the Watts family.

HARDWICK

George III. (1760-1801). Not in B. N. wall of tower. 3' x 2½'. Painted on canvas in heavy black frame.

HARTWELL

George III. (1760–1801). Not in B. 7' x 5'. Made of Coade stone, uncoloured. The church, now a redundant and roofless shell, was built for Sir William Lee by Henry Keene 1755–60. The arms were probably put up 1780–1800 as the Coade family did not develop their newly-invented material until after 1775. In 1950 the arms were rescued from the collapsing church with the intention of reerecting them in St. Mary's, Aylesbury and were stored in the County Museum. By a sad series of misunderstandings they were later installed – innocently but illegally – as a feature on the main staircase of new buildings at the Royal Grammar School, High Wycombe where they remain. They are illustrated as they were in Hartwell church in Betjeman & Piper's Buckinghamshire Architectural Guide (1948).

HEDGERLEY

George III. (1760-1801). Not in B. On N. wall. 2' x 2'. Painted on canvas in heavy wood frame. Restored and rehung in 1954.

HILLESDEN

William III. (1689-1702). B.393. On N. wall of tower. 5¼' x 5¼'. Painted on panels in a painted and gilded frame. On a pedimented panel above "Fear God, Honour the King". These arms are sadly decayed.

HITCHAM

George III. (1801–16). Not in B. W. end of S. wall. $3\frac{1}{2}$ 'x 4'. These arms have the effect of a hatchment being painted on a lozenge panel. It is not known whether they originally were in the church, nor when they were hung.

ICKFORD

George V. 1913, B.400. On W. gallery. 17' x 22½'. Carved in oak in high relief and coloured within a heavy brown frame. Above the crest



Plate IIa Langley Marish. The Stuart arms, used 1625 – 89.



Plate IIb Datchet. The Stuart arms.



Plate IIIa Penn. Stuart arms used by Anne, 1702 - 07.



Plate IIIb Fingest. Arms used by Anne, 1707 - 14.



Plate IVa Chearsley. Hanoverian arms as used 1714 – 1801.



Plate IVb Olney. Hanoverian arms as used 1801 - 16.



Plate Va Woughton. Hanoverian arms as used 1816-37.



Plate Vb Saint Leonards. Royal arms used since 1837.

ICKFORD (cont)

a scroll inscribed 'Domine salv, fac Regem nostr, Georgium V', These exceptionally fine arms were executed by Canon Vernon Staley, long Vicar of Ickford, whose fine wood carving adorns several Bucks, churches apart from the great font cover and other work at Ickford. The design was by E. Green, Somerset Herald and J. N. Comper.

LACEY GREEN George IV, 1825. Not in B. On W. wall of S. aisle. 5' x 5'. Painted canvas in heavy wood frame. 'G IV R' arms at base. The church was dedicated in 1825 and the arms although not dated must be contemporary. They are poorly designed.

(LAVENDON)

George IV. (1820-30). B.397 describes these arms as hanging on the W. wall of the N. aisle. The Revd. W. E. Douthwaite, Vicar in 1976, reported that "they were removed many years ago to the Old Rectory coach house where they gradually disintegrated".

LANGLEY MARISH

Charles I, 1625. B.392. Just inside W. door, 7' x 7'. A vigorous free-standing carving in painted wood; they were part of Sir John Kederminster's beautification of the church, and include his arms in the design. They are painted on both sides and formerly stood on the chancel arch between strapwork cartouches of the 'Sentences'. (Plate IIa).

LITTLE MISSENDEN Tudor. Fragmentary remains of these arms, the oldest post-Reformation set in the county, are visible painted on the S. side of the chancel arch. The three lions in the fourth quarter and a dragon supporter can still be identified.

LOVELL

LILLINGSTONE George III, 1799, B.395, Over chancel arch, 41/2' x 41/2', Painted on canvas in a heavy frame.

LOUGHTON

William IV. 1831, B.398. On S. wall of tower, 634' x 614'. Painted on canvas. It is a pity that this large example cannot be better displayed.

(MARLOW)

George IV. 1823. B.397 where they are described as "moulded in plaster and gilded, in dilapidated condition, the head of the unicorn is destroyed." They were then in the vestry, Commander O.F.M. Wethered of Remnantz, Marlow states that they have not been seen for many years and must be presumed lost.

MILTON KEYNES Stuart. (Before 1689 or 1702-07), B.392, Over N. door, 2' x 2'. A fine set, carved in wood and coloured,

NETHER WINCHENDON

Hanoverian, (1816-37), B.397. On W. gallery, 3' x 3', Painted on wood panel with carved frame.

NEWPORT PAGNELL

Victoria, (1837-1902), B.399. Over chancel arch. 2' x 2'. Carved in wood and coloured. Recently repaired and repainted by a craftsman from the Wolverton Carriage Works.

NEWTON LONGVILLE Hanoverian. (1816-1837). B.397. 3' x 31/4'. Painted on copper panel. Restored by Miss Anna Hulbert 1979.

NORTH CRAWLEY George III. (1760-1801), B.394, On S. aisle wall, 3½' x 3½', Painted canvas, framed. An excellent restoration in 1974 revealed 'G III R' at head.

OLNEY

George III. 1808. B.397. Over S. door, 71/2' x 53/4'. Painted on panels within Cambridge blue frame. As at Chearsley the lion supporter is heavily moustached. The heraldry has been corrected since 1926. (Plate IVb).

PENN

Anne. (1702-07). B.393. On N. wall at W. end of nave. 7' x 51/2'. Painted canvas in black and gilt frame. 'Semper eadem' motto surrounded by elaborate pink scroll. A fine example of the Stuart arms in excellent condition. (Plate IIIa).

PITSTONE

George III. 1733. Not in B. These arms, flanked by the 'Sentences', are painted over the chancel arch, 'Richard Sear and Bartholomew Adams, Church Wardens' on pedestal at base. Condition very poor, but the vesting of the church in the Redundant Churches Fund may make a restoration possible.

RADCLIVE

George III. (1760-1801). B.396. Over chancel arch. 4½' x 4½'. Painted on canvas, heavy frame.

SAINT LEONARDS

Elisabeth II, 1963. Not in B. On nave wall E. of S. door. 21/2' x 2'. Plaster, painted and gilded, Below 'Teresa Matthews and George Small, Churchwardens,' Miss Matthews, of Dundridge Manor, states that she commissioned the arms which were made by Horwood and Page. (Plate Vb).

SAUNDERTON Charles I. (1625-48). B.392. W. end of N. wall. 3' x 21/2'. Painted on wooden boards in black frame, B. evidently overlooked the 'C.R.' initials next to the heads of the supporters. Dr. Hartley considers that the fact that the motto is not scrolled but in a straight line indicates the reign of Charles I rather than that of his son,

SHABBINGTON George III. (1760-1801). B.394. On S. wall, 5' x 7'. Painted on six 10" boards. In 1926 these arms had only recently been discovered (in use as a door) and B, noted that the right side was incomplete. This part was recreated and the whole repainted by E. C. Rouse in 1970. The original painter was J. Seargeant of Brill, who also drew estate maps.

SHENLEY

George III, 1772. Not in B. Over S. door, 3' x 5'. Painted on canvas with gilt border and black frame 'G III R' at head. MDCCLXXII at base. The supporters stand on pillars and the whole design is framed within painted curtains. An unusual example which merits some attention.

SIMPSON

George II. 1742. B.393. Over chancel arch. 5' x 41/2'. Painted directly on the wall, they were discovered under whitewash in 1904. In 1926 they showed Anne's pre-1707 arms, but with G.R. and 1742 added. In the present reign they have been correctly repainted with the Hanoverian arms and the initials E.R. 2 added outside the frame.

(STEWKLEY)

George III, (1801-16), B.396, who notes that in 1925 they were in the village school, had been recently restored and "were properly cared for". In 1976 The Rector, Revd. J. P. Drake, could find no parishioner who could remember them and they must be accounted lost.

STOKE GOLDINGTON William IV. (1830-37). On S. nave wall, 5' x 64'. Painted on canvas within frame. An attractive set with the names of the Churchwardens, Hugh Higgins and Robert York, on a blue panel at the base and signed by the painter B. Wilford (of Newport Pagnell). As at Hanslope and Woughton, the Scottish arms are incorrect in the second quarter.

(STOKE HAMMOND) Victoria. B. (399) saw the arms '... very small, about 18 inches square, apparently carved in wood, and placed high up under the chancel arch'. In 1976 the Revd. G. Meek reported that they had not been seen for many years.

SWANBOURNE Edward VIII. 1936. Not in B. On W. screeen. 2' x 2'. Carved in wood, painted and gilded. An inscription beneath:

ERECTED BY THE PARISHIONERS OF SWANBOURNE IN MEMORY OF KING GEORGE VTH WHO ENTERED INTO REST 20TH JANUARY 1936 BELOVED OF ALL HIS PEOPLES

The W. gallery and screen of which the arms form part were erected as a memorial to William Colgrove (1920-31), The arms were put up on the initiative of the third Lord Cottesloe, of the Old House. Swanbourne, Lord Lieutenant of Bucks, 1923-54.

THORNTON

Victoria. Not in B. On W. gallery. 2' x 2'. Carved in wood and uncoloured, Major J. D. Young, of Thornton Hall, purchased these arms and installed them in 1948. Dr. Hartley comments "The shield is correct for Victoria. The fact that the supporters are shown creeping from behind the shield suggests early rather than late Victorian". The shield itself is of a much darker wood than the remainder; the large and rather crude lettering would appear to have been added at a later date than the rest.

(TOWERSEY)

George II. 1742. B.395. The parish was transferred from Bucks. to Oxfordshire in 1933. The arms were noted over the chancel arch by Betjeman and Piper in 1948. Subsequently, according to an elderly parishioner, they were removed by an incumbent "because congregation preferred looking at them, rather than listen to him".

UPTON

George I. 1716. B.395. On S. aisle wall. 51/2' x 4'. Painted on a panel with a black frame.

WESTON TURVILLE George III. (1801-16), B.398. Over tower arch. 6½' x 6½'. The 'G IV R' must have been added at a later date.

WEST WYCOMBE George III. 1763. B.396. Over chancel arch. The arms, which are painted on the wall, are the centre-piece of an elaborate design. The church was completely transformed in the taste of his time by Sir Francis Dashwood and re-opened in 1763. It would be interesting to know whether Borgnis, who painted the fine chancel ceiling, also did the arms.

WHADDON

William IV. 1832. B.399. On N. wall. 4½' x 4½'. Painted on wood panels with black and gilt frame. Crudely painted and much faded.

WHITCHURCH

George II. 1753. B.396. On N. wall at W. end. 6' x 4'. Painted on canvas in black frame. The date 1813 added at bottom right hand corner. B. recorded them as "very rotten and defaced"; it is deplorable that no attempt has been made to restore them since he wrote.

WOOBURN

George I. 1728. Not in B. On W. side of tower arch. 7' x 5'. Painted on canvas in black frame edged with gilt. In poor condition and placed so high that close scrutiny is not possible.

WOUGHTON

William IV. 1831. B.398. On S. wall of tower 5½' x 6¼'. Painted on canvas and framed. It has the false second quarter mentioned under Hanslope and Stoke Goldington; like the latter it is signed by Wilford, the painter. (Plate Va).

STOWE SCHOOL CHAPEL. On a carved screen in front of the organ there is a Tudor shield with the crown and within the Garter but without supporters, carved in wood and coloured. It was transferred, along with other fittings, from the former chapel at Stowe when Sir Robert Lorimer built the School chapel in 1928.

The Evolution of the Royal Arms

The Royal Arms of Great Britain as we know them to-day have evolved through six stages. The original coat, first used by Richard I, (1189-99), was three gold leopards on a red field. (The leopards later became lions; in early heraldry, a lion could only be rampant). So the blazon for England was, and remains to-day;

Gules, three lions passant guardant in pale or.

As part of his claim to the French throne Edward I, at the start of the Hundred Years War, quartered England with the arms of France which were then:

Azure, powdered with fleur-de-lis or.

This coat is known as France Ancient because it was altered by Charles V (of France) to:

Azure, three fleur-de-lis or. (Known as France Modern).

Henry IV (of England), in 1407, altered his French quarterings accordingly and so the Royal Arms from then until 1603 had France Modern in the first and fourth quarters and England in the second and third. These arms were reorganised at the accession of James I & VI. The existing arms were placed in the first and fourth quarters, in the

second, the arms of Scotland:

Or, a lion within a double tressure flory-counter-flory gules.

whilst in the third quarter it was decided to introduce Ireland, of which Henry VIII had been made Hereditary King in 1541:

Azure, a harp or, stringed argent.

The resulting coat was the Stuart Royal Arms used by James I, Charles I and II, James II and Anne for part of her reign. Quite different arms were adopted during the Commonwealth and actually survive in some churches but there are no examples in Bucks. During William III's reign, whether as joint or sole sovereign, the arms of Nassau:

Azure, powdered with billets and a lion rampant or.

were placed as an 'escutcheon' over the centre of the Stuart arms. When Anne succeeded her brother-in-law in 1702 she reverted to the Stuart coat until 1707, the year of the Union with Scotland, when England and Scotland were impaled in the first and fourth quarters, France Modern being placed in the second and Ireland remaining in the third quarter.

This coat had a life of only seven years for the accession of the Elector of Hanover as George I in 1714 necessitated a further change, the complicated arms of Hanover taking the fourth quarter:

Tierced per pale and per chevron: 1. Gules, two lions passant guardant or (Brunswick). 2. Or, powdered with hearts gules, a lion rampant azure (Luneberg). 3. Gules, a running horse argent (Westphalia). Over all three the arms of office for the Arch Treasurer of the Holy Roman Empire — on an escutcheon gules, the Crown of Charlemagne or.

These arms were used 1714–1801 when, after the Union of the Irish and English parliaments, major changes were made; the most significant of these was George III's decision to abandon the claim to the French throne (which in any case had been abolished ten years earlier) so, after four hundred and seventy years, the fleur-de-lis were removed. The arms now took almost their modern form -1 and 4 England, 2 Scotland, 3 Ireland with the Hanoverian arms placed as an escutcheon over the centre but now capped with the 'bonnet' of an Elector of the Holy Roman Empire. In 1816, by a decision of the Congress of Vienna, Hanover was elevated to a Kingdom and the bonnet on the arms was replaced by a crown. This coat was used during the last four years of George III's reign and for those of his sons George IV and William IV.

The final change followed William IV's death. Because the Sallic law did not allow Queen Victoria to succeed to the throne of Hanover (which went to her eldest surviving uncle, Ernest, Duke of Cumberland), the Hanoverian escutcheon was dropped and the Royal Arms assumed their present form.

Royal Arms in Glass

Bradbrook included Royal Arms in stained glass but his list is incomplete (it was compiled before the publication of E. A. Greening Lamborn's 'The Armorial Glass of the Oxford Diocese 1250-1850', published in 1949). Extant examples to-day are:

Bledlow: S. aisle, Edward III. France Ancient and England quartered.

Bradenham: Windsor Chapel. Henry VIII, dated 1542.

Chetwode: S. chancel. Henry III c. 1260. described by Lamborn as "the earliest piece of armorial glass in the diocese . . . indeed one of the earliest in the kingdom".

Fenny Stratford: N. aisle. George II, dated 1730. One of six contemporary coats put in by Browne Willis when he built the church.

Little Kimble: N. nave windows. Three much restored coats:

- 1. England. Before 1340.
- 2. England. After 1340 i.e. quartered with France Ancient.
- 3. France Ancient.

Langley Marish: N-E. chapel.

- 1. Edward II (after 1316).
- 2. Stuart Royal arms with Scotland in the first quarter.

Oving: E. window of S. aisle (behind organ). Modern (after 1887).

Weston Turville: S. chancel. England with label of France; it commemorates Thomas, Earl of Lancaster, nephew of Edward I: mid-14th century.

Addendum

BRADWELL ABBEY CHAPEL. Mr. Clive Rouse points out that a set of Stuart arms is painted on a wall of this chapel, which at present is undergoing restoration.