BATTLE AND DISTRICT HISTORICAL SOCIETY

September 2019 No 24

CONTENTS

PER BELLUM PATRIA

BATTLE AND DISTRICT HISTORICAL SOCIETY

The Society was founded in 1950 to encourage the knowledge and study of history within Battle and the surrounding area.

This is achieved through:

- a programme of illustrated lectures by specialists in their subjects;
- a programme of day or half-day visits to places of historic or architectural interest;
- an annual Commemoration Lecture on the Battle of Hastings 1066 or a subject related to it;
- a free annual published Journal with reports on the lectures, visits and business of the Society;
- free admission to the Battle Museum of Local History;
- membership of the Society's Research Group in the active study of all aspects of local history;
- publication of local history guides;
- presence on the world wide web of a dedicated Society website with Society news, useful local information resources, and contact details for members of the public or potential new members of the Society.

The Society is a registered charity (Number 292593) and is affiliated to the Sussex Record Society.

BATTLE AND DISTRICT HISTORICAL SOCIETY

THE SOCIETY'S OFFICERS

President *to 18 July*	Professor David Carpenter MA PhD FKC
President *from 18 July*	Professor David Bates FSA FRSA FRHistS
Vice-Presidents	Dr Don Nicol BSC
from 18 July	Christopher Whittick DL MA FSA FRHistS

Committee

George Kiloh	Chairman
Dr Keith Foord	Vice-Chairman
Neil Clephane-Cameron	Hon Secretary
David Sawyer	Hon Treasurer
Georgina Doherty	
Dr Peter Greene	
Adrian Hall	
Sarah Hall	
Alan Judd	
Charlotte Moore	
Richard Moore *to 15 May*	
Sue Moore	
Brigadier (Retd) Hugh Willing	

Further roles

Archivist *Georgina Doherty,* Journal Editor *George Kiloh,* Lecture Organisers *Adrian and Sarah Hall,* Membership Secretary *Adrian Hall,* Publicity Officer *Sarah Hall,* Reading Group convener *George Kiloh,* Refreshments at lectures *Sue Moore,* Representative to Battle Abbey Explanatory Board *Neil Clephane-Cameron,* Representative to Battle Museum of Local History *Sarah Hall,* Research Group Chairman *Dr Keith Foord,* Website Managers *Dr Keith Foord and Dr Peter Greene*

Honorary members	Professor David Carpenter *to 18 July*
	Professor David Bates *from 18 July*
	Mr and Mrs A Kinnear
	Dr D Nicol
	Christopher Whittick *from 18 July*

CHAIRMAN'S REPORT

This has been a hardworking and constructive year in which membership has grown and finances have remained steady and lectures well-attended. It may now be appropriate to bring members up to date on the work of the Committee.

Four officers of the Society are elected at a general meeting and their work will be known to members, at least in outline. There are many things to be done, however, and the Society being a voluntary body the Committee assigns these functions to such of its members as are willing to undertake them.

New volunteers to the Committee would be welcome and if members would be interested in helping the Society in these or other ways I or any of the other officers would be delighted to discuss the matter.

The most obvious area of work is organising the lectures. This is no easy task. First, it requires considerable thought, well in advance, as to the kind of topic desired. In this past year two lectures were directly associated with anniversaries – in June and July – but all thirteen needed to be balanced as to geographical area, historical period and the matter to be covered. The lecturers must be identified and approached, and when they have agreed they must be reminded nearer the date. Adrian and Sarah Hall perform this complex role with imagination, skill and patience and the Society's future depends on them.

For some years Adrian has also been membership secretary, a much bigger task than it appears. Sarah manages publicity, which involves the monthly newsletter, monthly bulletins in the local newspaper and the posting of notices of forthcoming lectures. She is also Representative to Battle Museum of Local History, with which we have developed close a relationship.

As far as the lectures are concerned we are also much indebted to Sue and Tom Moore, who provide the drinks

available before and after them. This looks an easy job but it isn't: it requires heavy lifting and the careful keeping of accounts.

What has been new in the last two years has been the development of a new website and the preservation of the large archive held by the Society. The website contains not only information about future lectures but also an increasingly large archive. Our archivist Gina Doherty works closely with Keith Foord and Peter Greene, who manage the website, and has led the identification of documents and oral histories to be preserved and made available to members and other enquirers. Peter is also now our link with our sister town of St Valéry-sur-Somme, with which we are hopeful of establishing a stronger relationship.

Two rather more traditional offices are standard in organisations such as the Society. Neil Clephane-Cameron has been Secretary for almost two decades, and without his clear advice and actions we might well have succumbed to making the kind of mistakes that lead to difficulties with the Charity Commission and other bodies. He is also our Representative to the Battle Abbey Explanatory Board, helping to cement the excellent relations that we have with English Heritage.

David Sawyer has been Treasurer for some time, and keeps a careful eye on things, though by no means in the mean-minded manner adopted by some other treasurers one has met over the years.

Vice-Chairman Keith Foord chairs the Research Group, which oversees and guides the immense amount of work done by its members in exploring and publishing the history of the district. A representation of the cover of Keith's most recent book, published by the Society, will be seen at the end of the Journal.

Last, your Chairman, apart from editing the Journal, is host to the monthly Reading Group, which studies historical works of wide interest.

In July we were pleased to elect a new President – Professor David Bates, who is a renowned historian of the early medieval period and author of a recent and revisionist biography of William the Conqueror. He has taken over from Professor David Carpenter, whom we thank for his service and for his excellent lectures.

At the same time we also elected as a Vice-President Christopher Whittick, Chief Archivist at East Sussex Record Office, and an historian in his own right. Both are delighted with their election and I am sure will be active members.

The above sounds well, and it is, but I cannot let the year go by without our remembering the loss of a colleague of long standing. Richard Moore, a former chairman, died on 15 May. Originally from Whatlington, he was a remarkable man, hard-working and mannered, well-read and with a sharp intelligence to the end, as well as a wry sense of humour and with a deep interest in current affairs as well as in history. We will commemorate him annually in the name of a lecture. He is already much missed.

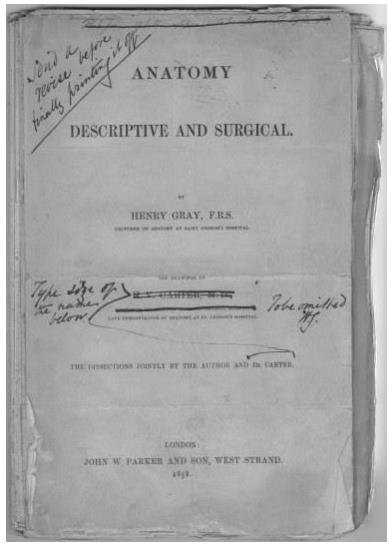
George Kiloh

Photograph by Peter Greene

THE MAKING OF GRAY'S ANATOMY

Dr Ruth Richardson *20 September 2018*

Dr Richardson started her talk by telling how she was inspired to write her book. She had previously written about body-snatching and in 2005 was invited to give a short radio talk about Gray's Anatomy. Soon afterwards Professor Susan Standring asked her to write an historical introduction to a new edition of Gray's Anatomy that she was editing at that time (the 40th edition – published 2008).



Gray's Anatomy was originally written by Henry Gray and illustrated by Henry Vandyke Carter. Earlier editions were called 'Anatomy: Descriptive and Surgical' and 'Gray's Anatomy: Descriptive and Applied', but later editions are titled, 'Gray's Anatomy'. The book is widely regarded as a seminal work, and has continued to be revised and republished. This reporter has had to have an extensive knowledge of anatomy in his radiological career and shares a well-thumbed 33rd edition (printed 1964) with his wife who was its original purchaser as a student physiotherapist, so he was intrigued to hear about how the first edition was conceived, produced and printed in 1858.

The talk started with an introduction to St George's Hospital and its environs in the early 1800s and to the characters of Gray and Carter. The old St George's Hospital had been

founded in 1733 but was rebuilt in 1827-44 at Hyde Park Corner. Its London brick-built medical school with its anatomical theatre, 'the best dissecting room in London', was established in 1835 in nearby Kinnerton Street, which also has small mews houses, formerly for servants and stables but today making desirable residences. In 1851 it was near the Great Exhibition and London was expanding fast.

Henry Gray (1827-1861) by H. Pollock [CC BY 4.0 (https://creativecommons.org/licences/by/4.0)]

Gray, whose family were well-connected, lived nearby at 8 Wilton Street. He was on track to become a surgeon, was well connected and had no financial problems. He is said to have been a most painstaking and methodical worker. By the age of 25 he had been elected a Fellow of the Royal Society and by 26 had earned several prizes for his work, which included a prodigious study of comparative anatomy.

In 1852-53 Carter spent some time in Paris where it was easier to obtain access to bodies for anatomical study. In June 1853 he became a student in human and comparative anatomy at the Royal College of Surgeons. His drawing skills helped him earn a little money as he produced designs for the St George's School of Medicine.

He also worked for John Queckett, an expert on microscopy and histology, and Richard Owen, one of the best anatomists of the era who became the first director of the Natural History Museum. The collection curated by Owen of the comparative anatomy of many animals from all over the world was unfortunately mainly lost during World War II.

Carter came from a non-conformist family and had grown up in Scarborough. He was introspective and shy and lived in

nearby lodgings. He was there on merit, working as an anatomical demonstrator. He was doggedly making his way professionally, obtaining apothecary, surgical and medical qualifications plus skills in microscopy that would lead to an MD.

The initiation of the idea of an anatomical text book came some time in 1855, possibly either from Gray or the publishers, Parkers. Apparently Parkers held 'dinners' for authors and were looking for something commercial to help them shift some other textbooks.

Henry Vandyke Carter (1831-1897) [Public domain], via Wikimedia Commons

Carter was four years younger than Gray, but the two would have known each other and had worked together before this, with Carter producing illustrations for which Gray had never credited him. So Carter did have some hesitation, but the Parkers proposal was 'providential' for Carter who was clearly financially struggling and the fees would pay for Carter's education.

So work started in 1856, but there was really no doubt that Gray was the employer and Carter the employee. Carter's background made him respectful of the bodies that he worked on and learnt from, much more so than others, and this shows through in his illustrations, which are examples of clarity, dignity and beauty, sharing some of the characteristics of cartography being developed by the Ordnance Survey.

This resulted in highly legible anatomy. The illustrations were transferred to woodcuts for printing by Butterworth and Heath, with all the annotations in fine engraved text. The design of each diagram meant that it was not necessary to jump from place to place in the book to check the name of a

structure. Unfortunately Parkers had already purchased the paper without informing the illustrator and it was found that some of the woodblocks were a little oversized, a fact that was overcome in the first editions by cropping off the engraved titles and allowing a bit of overflow beyond printing margins.

The book was published in 1858 at a cost of 28 shillings (£1.40) *see page 8 above*. Its review in the British Medical Journal revealed little idea of the reality of the amount of work that had gone into its production and the quality of the illustrations. A first-proof portfolio is held in the archives of the Royal College of Surgeons and this can be compared with the first edition, showing where the printers had to make adjustments for the somewhat oversized engravings.

Dr Richardson ended her talk by discussing some features of the partial set of first-edition page proofs held in the archives of the Royal College of Surgeons of Edinburgh. These show notes in the hand of Henry Gray significantly decreasing the type size of Carter's name on the title page (above), which the printer had equitably set at an equal size, and deleting the new title of Carter who had just been appointed Professor of Anatomy at Grant College, Bombay (now Mumbai) to 'Late demonstrator of Anatomy at St Georges Hospital'.

Gray was to receive royalties of £150 for every 1000 books sold, but Carter received only a one off payment. Clearly she feels that this reflected adversely on Gray's personality, something she had noted in other works.

Gray died of smallpox a few years later, in 1861. Carter went on to have a significant career in tropical medicine. He retired from India back to Scarborough in 1888 and died in 1893.

Keith Foord

THE PRIVATE LIVES OF THE TUDORS

Tracy Borman *18 October 2018*

The Tudors cultivated a public image that enhanced their prestige – the claim to the throne of the first Tudor king, Henry VII, was not strong and so they were particularly careful to boost their authority by ensuring an image of splendour, strength and mystique. But what were they really like behind the scenes? Luckily, the Tudors were very bureaucratic and wrote everything down. They have left plentiful records, including letters from the royal servants, well-educated sons of noblemen, who detailed daily life.

Every Tudor palace was designed for prestige but also to provide privacy for the monarch. Each had privy chambers (the private rooms of the monarch), staterooms, courtyards and servants' quarters – the closer people got to the privy chambers, the more important they were. This arrangement was not new – even William the Conqueror had a privy chamber. It was Edward IV who considerably increased the opulence of the private apartments and the Tudors went further and created a distance between private and public life. Privacy, however, was a relative term: the monarch was never alone – at three months old the young princess Elizabeth had 50 servants!

Henry VII has a reputation as a miser but this was by no means true for a great part of his reign. In the first two years of his kingship, he spent the modern-day equivalent of £3m on his wardrobe and would continue to spend large sums, particularly at times when he was under threat – this was one way to prove his strength and authority. He was also a party animal who liked gambling, losing the equivalent of £20k at cards on one occasion; and a ladies' man who fathered at least one illegitimate child before taking the throne. He made a political marriage to Elizabeth of York – on the wedding night, they had to undergo the bedding ceremony, with 30 courtiers watching as they were undressed to their shifts and put to

bed; the courtiers then retired to an adjoining chamber and listened in. Neither Henry nor Elizabeth would have considered this strange – the marriage bed of the monarchs was considered of great political importance.

The marriage blossomed and was very harmonious, producing seven children of whom four survived. Elizabeth died shortly after giving birth to their seventh child; Henry was grief-stricken and retired to his privy chambers for so many weeks that courtiers had to persuade him to come out, fearing rebellion if he did not pick up the reins of government again. Unexpectedly, he spoke of re-marriage: his first choice was his widowed daughter-in-law, Katherine of Aragon, with a view to retaining her dowry – but she was horrified and would not agree; his second choice, Joanna of Naples, likewise refused.

By Hans Holbein

He was, of course, succeeded by his second son, Henry VIII. Contrary to his reputation, in his youth he was thought of as a 'strapping, handsome Adonis' and it was evident from contemporary sources that, although confident in public, in private he was 'one of the most timid men you could hope to meet'. This view may have been caused at least in part by his hypochondria. Dr Butts, his physician, would examine the King every morning to look for signs of illness and he

had an extensive array of tinctures and medicines, some to Henry's own recipes. As was commonplace, Henry would have a horoscope cast to predict his health – indeed, the astrological clock at Hampton Court was installed in recognition of the importance he attached to astrology.

Ironically, he loved the very dangerous sport of jousting. He suffered many injuries over the years but one he received in 1536, when he was in his mid-forties, changed him significantly. He was left with an ulcerated leg which did not heal and left him in terrible pain. As a result he could not exercise, but he continued to eat his average 5000 calories a day, which resulted in a 17-inch increase in his waist within five years and the historical image of him as very obese. It was said that the three largest men at court could fit into his doublet. His poor diet also led to other problems and Heneage gives a graphic description of an enema endured by the King – two pints of salted herbal water was inserted by means of a greased pole which was kept in place for two hours. This seemed to have worked but the King was reported as being very sore! Even on the toilet, Henry was attended by the 'Groom of the Stool': in spite of the unpleasant duties, including cleaning him, this was a very sought-after position as it allowed ample opportunity to ask for favours for oneself or others.

There was further humiliation for Henry. Even Anne Boleyn attested that he lacked 'puissance' in bed, and by the time of his marriage to Anne of Cleves he appears to have been impotent. His failure to consummate the marriage was of course blamed on Anne for being ugly and it was annulled.

In what for the time was his old age Henry sought increased privacy and had a secret lodging built at Hampton Court, complete with an early form of stair lift to help him between floors. In early 1547 he retreated to Whitehall – only three attendants were with him when he died. He would not even let his wife, Katherine Parr, see him in his sorry state. This is in

stark contrast to his father's death, when he was attended by many courtiers.

Henry's son Edward VI succeeded him. For most of his short life he was in robust health and was thoroughly spoilt – his schoolbooks even had golden covers encrusted with precious jewels. He appears to have had a very cold personality: on one occasion, after being admonished by a tutor, in his rage he ripped one of his pet falcons to pieces; and on another, he noted in his diary, just in passing, the execution of his favourite uncle. Weakened by a bout of measles, he succumbed to tuberculosis and was succeeded by his half-sister, Queen Mary.

Again, Mary was more than her historical image. In private she was a great entertainer and regularly held parties; she kept a fool and liked a drink, according to an ambassador's letter. For the most part, however, her life was one of great sadness and her false pregnancies were particularly hard for her to bear. On her death, her prayer book was found to include prayers for pregnant mothers and the pages were stained with her tears.

Elizabeth I succeed her half-sister in 1558. She was very popular at the beginning but her decision not to marry led to unease and gossip. There is little doubt that Robert Dudley, Earl of Leicester, whom she met at eight years old, was her soulmate but it is doubtful that the relationship was physical – in 1562, Elizabeth was thought to be on her deathbed from smallpox and attested that nothing improper had happened between them. At least in 1562 it appears that she was indeed the Virgin Queen. It is thought her reluctance to marry was due to the lack of positive role models for happy marriage and also a disinclination to be ruled by a man: she wanted to rule in her own right.

She was the vainest of all the Tudors and would take two hours to get ready in the morning and the same time to get ready for bed. In total, Elizabeth had 6000 dresses. It was

thought that none had survived but a discovery was made recently at Bacton Church in Herefordshire: an altar cloth that was behind a frame turned out to be adapted from one of her dresses. It was probably given in memory of Blanche Parry, one of her favourite ladies-in-waiting.

Elizabeth used many different potions to cover up the ageing process and the effects of the smallpox, not least white lead, which of course had the adverse effect. Her love of sugar (she even put it on salads and used it in her toothpaste) resulted in her having terrible teeth – her ladies used 'plumpers' to fill out her cheeks after she had lost them.

She was probably the cleanest of the dynasty, having a bath a month 'whether she needed it or not' and changed her linen under-garments up to three times a day – this was how the Tudors prevented themselves from smelling: linen was very effective.

Only her ladies were allowed in her privy chambers but the Earl of Essex barged in on one occasion and failed to recognise the e**l**derly lady he found there. However, in public it was very different: her efforts to maintain a youthful image on the public stage appear to have been successful until very near the end, with one ambassador remarking that she appeared to be 20 rather than 70!

She died on 24 March 1603 and the throne then passed to the Stuart dynasty with the accession of James VI and I.

Sarah Hall

CITIZEN CLEM

Professor John Bew *15 November 2018*

Professor Bew is a historian with an impeccable socialist background, an author and contributor to the New Statesman. His subject here was clearly a man he admired and his talk tended to concentrate on the individual's personality and behaviour rather than on his political achievements. He took it as accepted that the post-war Labour government was the most active in its social achievements and contained within its cabinet some of the most charismatic personalities of the twentieth century, chaired by one of the least.

Attlee was the personification of ordinariness in appearance – short of stature and always sporting a slim moustache, he looked slightly ridiculous at a time when his contemporary in Germany (similarly undistinguished in appearance) was mesmerising his countrymen and ultimately by force of personality leading them to disaster. Hitler had a hypnotic attraction which Attlee totally lacked but Attlee possessed decency, passion, Christian ethics and vision. He acknowledged that he was no intellectual but he was a voracious reader with a library of 3000 books and he loved poetry.

Attlee had a conventional middle-class upbringing. Born in 1883, he was the fourth of five sons (and three daughters) of a Putney solicitor; he was educated at Haileybury and then University College, Oxford. The Haileybury connection possibly influenced his political attitude towards India: the college had been established for the sons of the East India Company and no doubt he had unconsciously absorbed the ethos of service to India.

Attlee admitted to having no hidden depths of serious political thought and he was the least likely character to be a revolutionary that one could imagine but he believed in the morality of politics and the foundations of his life were

1 the appreciation and understanding of the rights and responsibilities of citizenship, and
2 patriotism: nationalism was dangerous but patriotism an ideal.

He set his vision within the historic context of the Roundheads but disliked and was contemptuous of the liberalism of Gladstone.

It was inevitable that a man with his social conscience should offer his services to the Limehouse Mission, where he was appalled at the poverty and degradation within the shadows of the City of London, and this drew him to the embryonic Labour Party. He became the first Labour mayor of Stepney (1919), the first Labour MP for Limehouse (1922), Deputy Leader of the Labour Party (1931) and Leader from 1935. His colleagues were a motley crew and it seems that he had more sympathy with working class members than with the public school socialists whom he regarded as permanent undergraduates.

He served in the Great War as a Captain in the South Lancashire Regiment and in Iraq he experienced the indignity of being wounded by 'friendly fire'. He was not a natural soldier, being moved by patriotism rather than an eagerness to fight. His elder brother Tom was a conscientious objector; Attlee did not approve and said that he suffered from 'anarchic individualism'. He shared the view that the soldiers had been betrayed after 1918 but this never led him to embrace communism, of which he was always suspicious.

As Deputy Leader of the Labour Party he was overshadowed by characters as diverse as Oswald Mosley and Herbert Morrison, the latter always feeling that he was a better person to lead the party than Attlee.

He regarded his finest achievement as joining Churchill in the coalition cabinet of 1940. He developed a deep relationship with Churchill that was wholly reciprocated. Churchill saw the

qualities in Attlee that his modesty kept from the public. Surprisingly Attlee also had a very close relationship with Ernie Bevin which was, again, returned. And with his wife Attlee was a devoted husband and father.

https://richardlangworth.com/clement-attlee-tribute-winston-churchill

The suggestion, therefore, that Churchill had quipped that Attlee was 'a modest man with plenty to be modest about' is probably apocryphal; if anyone said it, it was more likely to be Morrison, who wrote to Attlee suggesting that he (Morrison) should take over the leadership of the Party. Attlee's reply was succinct. 'I thank you for your letter, the contents of which have been noted'.

The 1945 election was a surprise. Churchill and the establishment expected the Conservatives to be elected easily; instead, Labour won by a majority, rumoured to be on the backs of the soldiers who didn't want a repetition of 1918.

Attlee led the government through a period of dramatic change, altering society without a revolution: nationalisation of the railways and utilities, the creation of the National Health Service, the independence of India and the beginning of the process of granting self-government to the colonies.

Qualifying as a barrister in 1905, he gathered many prodigious honours before being raised to the peerage in 1955. His hoped-for retirement was blighted by the death of his wife, twelve years before his own. His last public appearance was as a pall-bearer at Churchill's funeral in 1965. Looking frail but dignified, he was universally admired for his determination and courage.

It was indeed remarkable that a man so lacking in charisma and supremely modest should be considered one of the great prime ministers of the twentieth century. He apparently had complete control of his cabinet and his reported interventions were famously laconic and pertinent. He died on 8 October 1967 at the age of 84, full of honour and respect.

The statue of Clement Attlee in the Houses of Parliament

A final verse is apt:

There were few who thought him a starter
Many who thought themselves smarter
But he ended PM
CH and OM
An earl and a Knight of the Garter.

David Sawyer

The desperate winter of 1947

CAPABILITY BROWN

Tom Oliver *13 December 2018*

When it was created in the 18th century, Croome Park, Worcestershire seat of the Earls of Coventry, was one of the most famous designed landscapes in the country. Tom Oliver was Project Manager of its restoration between 1997 and 2002; his lecture gave a fascinating first-hand account of the challenges the project faced.

The house, park and landscape features at Croome represent the first complete design by Lancelot 'Capability' Brown – the first of more than 200 designs implemented between 1750 and 1783, including Ashburnham Place near Battle.

Brown's influence on English landscape style and taste has remained powerful ever since. Ashburnham illustrates Brown's design characteristics with its large scale, its lakes, its plantations, and its carefully planned drives, buildings and views. It cost £2.5 million at present values – an impressive sum. But at Croome, the expenditure was more than forty times this – the equivalent of £88 million.

Lancelot 'Capability' Brown 1716-83, by Nathaniel Dance

Croome was rescued from probable destruction when it was bought by the National Trust, helped by a Heritage Lottery Fund grant, in 1996. Eventually the Palladian mansion at the heart of the park was rejoined with its surroundings; three 'eyecatcher' buildings beyond the confines of the park but part of the original design were also brought under National Trust care, and the sweep of parkland, artificial river, lake, and series of

gardens and ornamental buildings within a perimeter of woodland were restored.

The terms of the Lottery award were that the landscape should be returned as closely as possible to Brown's original conception. Inevitably, restoration came up against modern restraints and priorities. The Croome story is a lesson in the reconciliation of historic landscape with modern obligations. Luckily, the exceptional archive preserved at Croome meant that a conscientious restoration could be carried out to a high level of precision.

Brown designed the artificial river at the centre of the park, issuing from the lake, as a fifth-scale model of the Severn as it meandered through the wider Coventry estate. But by 1996 decline in management meant that the river had become a bio-diverse marshland and reedbed – a valuable rarity in the modern West Midlands. The nutrient burden in the river was assessed and calculations made as to the reduction in nutrients needed to solve the problem; glassy, clear water flowing slowly between curving, close-cropped banks as envisaged by Brown requires lower levels of nutrients. The Trust faced a conflict between conservation and restoration.

Most of the parkland had been converted to arable fields, ending with grazing at the water's edge and leading to loss of open water. Since 1945 use of fertilisers upstream had severely affected the quality of the water. Moreover, 21st century rainfall carries a much higher level of nitrates than in the 1750s. All this resulted in algal growth and colonisation by marginal plants, covering the water with a clogging ‘floating carpet’.

So the Trust dug a series of small lakes upstream, in part of the park beyond the key designed views. Planted with reeds from the artificial river, these rapidly became valuable reedbed habitat, helping to filter and purify the water flowing into the park. The river reedbeds could then be removed without net loss of habitat for scarce reed warblers. The new

lakes also store winter rain to be released in summer, when a lower flow had previously exacerbated the nutrient problem. The purified water provides a slow-flowing, low-nutrient river, perfect for dragonflies and damselflies.

Croome Park was found to contain excellent populations of rare beetles feeding on dead and dying wood: an indicator that a place has not significantly changed since plant colonisation after the last Ice Age. It was also apparent that the design had been diminished by sixty years' loss of mature trees, due to ploughing in the park, stubble burning (until 1993), and field draining. Many remaining trees had dead branches.

Landscape aesthetes argued that Capability Brown would not have tolerated shaggy dying oaks and that such trees should be removed, while biologists wanted to preserve the beetles' habitat – such beetles cannot fly far and therefore do not disperse to new homes. Tom Oliver pointed out that if the beetles couldn't easily disperse, they must have been present since the Ice Age – in which case Brown must have tolerated, even welcomed, stag-headed oaks with crowns broken by dead branches; from a restoration point of view, they should be retained. The risk to the public from falling branches, away from paths, was acceptably low, as oak branches rot slowly.

Most of the park was ploughed during WW2; what little grassland remained became valuable as a last reserve of the park's plants and insects. The abandoned pastures contained sweeps of great anthills, 60cm high, similar to termite mounds and taking many years to form. Some restorers saw them as indicators of abandonment, incongruous in the parkland of an earl. But anthills, increasingly rare due to agricultural improvement, feed green woodpeckers and other species. Should old parklands show the patina of age, rich in accretions over time, or be a smooth sward?

The estate archive solved the dilemma. A bill from the 1790s recorded the removal of twenty wagonloads of anthills – so

until five years *after* Brown's death, the face of Croome was marked with the pattern of ancient pasture. Then it was scraped smooth. The choice now was to restore one condition or the other, both legitimate acts of restoration. Given the scarcity and charm of the anthill cities, Tom's team chose to restore to the year before the wagons bore away the evidence of many decades of grazing.

To recreate the garden paths, the restorers used local ungraded gravel, thick with binding sediment. Restoring the views meant removing unsympathetic Victorian tree planting. An intrusive 18th century style of wooden fencing was used to show the need for expensive ha!ha! excavation before the age of graceful iron park railings. On the buildings, local sand was used to create mortar joins seamless in colour and texture between original and modern work.

This dialogue between past and present continued throughout the restoration. The Trust's objective was always to restore to the highest standards using all available evidence. Tom Oliver's lively and well-illustrated lecture showed how Croome became a thoroughly accurate 18th century landscape, now enjoyed in the 21st century by thousands of visitors.

Charlotte Moore

Croome Court and part of the park today (© National Trust)

PESTILENTIAL EFFLUVIA – THE CRESY REPORT OF 1850

Neil Clephane-Cameron *17 January 2019*

The Public Health Act of 1848 was a response to growing national concern about public health. It established a General Board of Health which on petition was required to order a report on the sanitary conditions prevailing in a town or city. In July 1849, due to so many of the town's inhabitants suffering from the effects of poor sanitation, Edward Holland, a surgeon whom we shall see quoted, submitted a petition on behalf of 50 Battle rate-payers.

The Board commissioned Edward Cresy, an architect and engineer, who arrived in Battle in June 1850. Running to 26 pages, his report was published on Christmas Eve of that year and is nothing if not thorough; nor does it pull any punches.

Cresy's legacy is a profoundly positive one. He noted that

> the natural advantages of this town are considerable, and favourable to a low rate of mortality, [then laments] but typhoid and other maladies have arisen here… the young... are often left to amuse themselves for hours around... poisonous receptacles where malaria is generated, despite its being... universally admitted that all epidemics are increased in intensity wherever the air is affected by such pestilential effluvia…

What follows is his report on key areas of the old town.

1 Upper Lake

At the south-east angle of the churchyard the ground has so accumulated from the number of interments

that the surface is now nearly on a level with the meeting bar of the sash of Messrs. Ellman's house. Upon examining the rooms, ... they indicated damp, and without an effectual drainage to discharge the soakage water from the churchyard these buildings cannot be rendered healthy.

Now **Stiles's garage**

Beyond Messrs. Ellman's offices is the dwelling-house of Mr Frederick Ellman, and the pump in the rear is permitted to be used by the inhabitants of the cottages situated farther eastward.

6-10 Upper Lake

Five cottages on the same side of the way, which are let for 2s. each per week, have only one badly-constructed privy for the use of all that inhabit them.

The Lower Lake

through which passes the road to Hastings, has several houses with drains running under them into the road, and often producing an atmosphere that is not only disagreeable but unhealthy. Several of the foundations have the mortar between the brick courses entirely washed out, and the overflowing of the surface drains frequently finds its way over the floors from the back to the front, saturating the entire area with sewerage water.

19 Lower Lake

George King inhabits a house which has a privy and pigsties at the back on ground higher than its foundations, and the overflowings pass over the floors of his living rooms. Fever has seldom been long absent from this locality, and the wife and child have both died in consequence. Upon examination of the brick floors, the whole area was saturated in the soakage, and it will be necessary to take up the pavement, and remove the infected earth after the drainage is complete.

1-9 Lower Lake

The cottages on the bank, at the side of the road, are all in a similar condition, and at times are inundated by the drainage in

their rear. The pigsties and sinks pour all their surplus liquids through the houses into the high road, and wherever a surface drain has been provided, it is ineffective, allowing the overflowings to sap the foundations.

Now **Burstow & Hewett**

On the opposite side of the road the prison is situated, in the midst of cesspools, and without properly constructed drains. Against the north wall is an open receptacle for two large pigsties and a privy, the owner of which, Mrs Vidler, said that she never experienced any smell from them, but that the value of the sullage obtained was considerable, and she would be sorry to be obliged to remove it.

Here is the evidence of the mischief arising from allowing any open ponds to be made to intercept the drainage, which, situated in a neighbourhood of cottages, cannot but change the condition of the atmosphere, and often absolutely poison it, as was observed by several persons occupying the houses adjoining. The prison, though small, has several of these ponds of filth under its very walls. The natural drainage is towards the ponds of the Abbey Park, which formerly served for the supply of fish.

Now **Senlac Inn area**

The Old Workhouse has been sold, and converted into several tenements. “Here,” Mr Holland observed, “Typhus fever had prevailed to an alarming extent. White, Matthews, and two children had died of typhus, as well as several other persons.” An open ditch, which has no outlet, receives all that runs from a tanyard on the opposite side of the road, which is frequently very offensive; in heavy rains this is disturbed and washed away over the adjoining low grounds.

Now **Langton Close**

The National and Langton Schools … comprises two rooms about 36 feet by 18 feet, with a master’s house between them. At present there are 70 girls and 80 boys in attendance. At the back the premises are confined, which occasions the privies to be placed too close to the school-rooms; and as there is no supply of water, they are at times very offensive. At a short distance is a

pond, the water of which is undrinkable, in consequence of several runs of foul matter into it.

Chequers Inn

The Chequers Inn, at the east end of the principal street, where the road turns off to Hastings, is an ancient establishment, though it has undergone several changes. On examining the water from a well in the washhouse it was found to be highly discoloured, and to contain a vast quantity of organic matter, which was poured into it from a cesspool or dungheap on the outside of the building, and there are runs from the liquid matter of other collections on the premises into a pond in the garden, where a tile drain discharges it at a certain height into the ditches which lead to the ponds in the Abbey Park, passing in the rear of the prison already mentioned.

Now **The Pilgrims Rest**

an old timbered house, covered with tiles, and under that part of the roof which is in the occupation of James Jenner, several pigs are kept; and where Ashton Tongs has his rooms, both pigs and privy are highly offensive. The three families who reside here, Mr Holland states, have all had fever; on examining the cellar, it was found to be in a dirty condition, a receptacle for filth of all kinds, and most offensive; how different the state of this old mansion when occupied by the steward of the wealthy Abbey, placed in the midst of a spacious well-cultivated garden, occupied by one family, and surrounded by a healthy atmosphere, instead of the pollution which now lies at the very threshold.

Now **The Crafty Norman**

Mr Gausden, butcher, has a slaughter-house in the rear, which is much complained of … On one side is a copper, into which the offal is thrown to be boiled, and the stench which arises from the fumes that escape is an annoyance to the whole neighbourhood. Adjoining is a large stye, and several pigs were feeding upon flesh. In front was a heap of foul and fœtid matter, 15 feet square or more, together producing an intolerable stench. After and during heavy rains, much of the contents of this yard is diluted and carried away into the ditches of the meadow at the back of the George.

Now **Emmaus**

> Mr Dobell, the pastry-cook and confectioner, has the premises adjoining the Star Inn [later the 1066]; here the privy and cesspool are in a bad condition….

Now **Boots** and **Old Brewery Yard**

> The Lion Inn… the privy is out of condition, and is the subject of complaint in the neighbourhood...' In the garden is a large vault or storehouse for beer, and a brewery, the drainage from which is….across the road….'

Any reader of this brief extract will surely agree with Cresy that

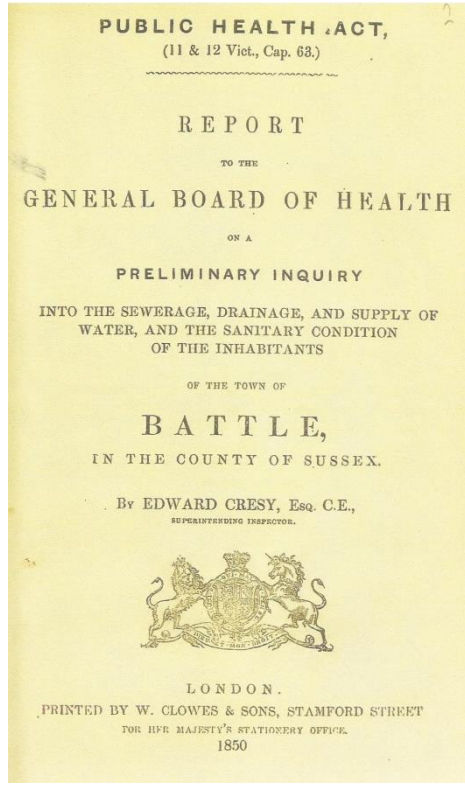
> From the above observations, which are by no means overcharged, it must be evident that there is an absolute necessity to provide house-drains and sinks of a proper quality throughout; and after each house has been provided with water, on the constant supply system, then all cesspools may be superseded, and water closets adopted, pipe sewers, or underground conduit, conveying away all drainage to a point where it can no longer affect the salubrity of the district, or be penned up to the annoyance of any inhabitant...'

Indeed even before Edward Cresy's visitation one resident was shining a light on to the future, for Cresy uniquely describes 17 High Street:

> Mr Lawrence's house and premises are maintained in the most perfect order, and cleanliness prevails everywhere. The drains are covered, as are the cesspools into which they discharge.

Edward Cresy died on 12 November 1858 and is buried in the churchyard at Horton Kirby, Kent. While preparing for this talk I visited his grave and found it neglected and overgrown, in contrast to the rest of the churchyard. By way of gratitude and tribute to mark the 160th anniversary of Cresy's death I sought the permission of the parish council and tidied the grave.

Neil Clephane-Cameron



PUBLIC HEALTH ACT,
(11 & 12 Vict., Cap. 63.)

REPORT
TO THE
GENERAL BOARD OF HEALTH
ON A
PRELIMINARY INQUIRY
INTO THE SEWERAGE, DRAINAGE, AND SUPPLY OF WATER, AND THE SANITARY CONDITION OF THE INHABITANTS
OF THE TOWN OF
BATTLE,
IN THE COUNTY OF SUSSEX.

By EDWARD CRESY, Esq. C.E.,
SUPERINTENDING INSPECTOR.

LONDON.
PRINTED BY W. CLOWES & SONS, STAMFORD STREET
FOR HER MAJESTY'S STATIONERY OFFICE.
1850

COLLECTANEA – 101 TALES FROM OUR WEBSITE

Keith Foord *17 January 2019*

This talk was an introduction to BDHS's collection of recent papers from our own members and a few others. These are all available to view on BDHS's website which can be found at http://www.battlehistory.btck.co.uk/ in the section called *Collectanea*. There were 101 papers when the talk was given; by February 2019 there were 111… so to keep up get reading!

A brief run-though of how to access Collectanea and its eclectic collection of papers on all things historical about Battle and District, and for the earlier history of the area from the wider eastern Sussex area, showed just how wide a spectrum was available to read and download. A full title index and a comprehensive index of the whole collection are also there.

The talk wound up with a mini-quiz (with prizes!) to illustrate the content in a fun format, which showed how well informed the audience was about local history, followed by a very brief introduction to the new BDHS digital archive, which will be able to be accessed from the website later in the year.

Any member is invited to submit a paper on a local history topic, to be reviewed by the Research Group and/or to join the Group. Just ask one of Keith Foord, Neil Clephane-Cameron, George Kiloh, Sarah Hall, Adrian Hall or Georgina Doherty.

Keith Foord

THE SOCIETY'S AUDIO RECORDING ARCHIVE

Georgina Doherty *17 January 2019*

Introducing the Audio Recording Archive, Georgina explained that it consisted of a series of digital audio recordings which had been produced from original audio cassette tape recordings held in the Society's archive. They had been created in order to preserve the original recordings as part of the Society's new online Digital Archive.

The recordings had been made between the late 1970s and early 1990s and a few had been transcribed. They were now available for anyone to listen to via the society's website.

She went on to explain that the recordings fell into four categories:

- oral histories
- Re-recordings of original tapes
- Recordings of interviews on topics of the time
- Recordings of lectures/talks.

Each type of recording might contain useful information for those researching their family history; the local history of the area; or as evidence for personal research topics. Most of the people recorded were now deceased. Starting with oral histories, examples of each category of recording were looked at in turn.

Tony Emeleus, whose family ran a chemists' shop in the High Street for many years, had made a couple of recordings, in which he spoke of his memories of Battle during the 1920s. The recordings take the form of a walk up and down the High Street, with Tony relating how the High Street had looked in his youth, passing on various anecdotes.

The speaker told the Society that she had gleaned a rather surprising insight into her own grandfather's character while

listening to the tape. She knew he had run a fish shop licensed to sell game at 52 High Street between about 1912 and 1935,

The former fish shop, at 52 High Street

but she hadn't known that he wasn't always that fussy about the provenance of the game, which sometimes, apparently, came from local poachers!

Next door to the Emeleus chemists' shop had been Fred Holland's butchers, at number 20 High Street. Fred had also recorded an oral history, telling what it was like to be a butcher between the start of the First World War and the end of the Second.

Hollands the butchers

The speaker summarised the tape explaining that it told of the early methods and challenges of refrigeration – including hanging meat in a passage beside the shop to keep cool, the methods used in the abattoir and rationing in World War Two.

There was one recording in which key figures were interviewed. This had been made when the Abbey had been

Battle High Street, 1930s

sold in 1976, and reflected the many concerns of local people, giving a real insight into the issues and feelings of the time.

The interviews were with Robert Emeleus, giving the point of view of the Council of the day and its efforts to form a trust to purchase the Abbey; Brigadier Learmont of the Historical Society, who put forward the national historical importance of the site; and Godfrey Harbord (Webster), whose family owned the Abbey Estate, who explained how the trust set up to look after the Abbey Estate owing to the incapacity of its owner, Lucy Webster, had decided to sell the Abbey against the family's wishes.

The final example was a recording of a talk given by Gerald Brodribb, in which he told how he had discovered the Roman bathhouse at Beauport Park. This lecture was particularly interesting, the Society was told, if combined with a visit to the local museum, where many of the artefacts mentioned were now on display.

In summing up, the speaker hoped that the audience would "Enjoy exploring the archive and through it, Battle's past".

Georgina Doherty

CHARLES THE MARTYR

Professor Jackie Eales *21 February 2019*

Professor Eales began by reminding members that this year was the 370th anniversary of the execution of Charles I, which had taken place on 30 January 1649. Following this event the cult of the Martyr King had grown up – her aim was to examine how this had come about, suggesting that Charles had taken a positive decision to become a martyr to keep the Royalist cause alive. She would examine the Civil War background and what had led to this event. She likened the 'shock value' of the execution felt by contemporaries to that felt when Kennedy was assassinated.

Professor Eales introduced the main protagonists, Charles, Oliver Cromwell and Charles's wife Henrietta Maria, by reference to their portraits.

The Van Dyck triple portrait of Charles I, made in the 1630s during the eleven year period when Charles had ruled without Parliament, was the first to be examined.

© National Portrait Gallery, London

Charles appeared both serious and reflective. Oliver Cromwell was viewed next, as portrayed in his portrait by Robert Walker *[next page],* again noted as serious and reflective but also as a man who decides with his conscience. Henrietta Maria, as portrayed by Van Dyck, was viewed.

She had been fifteen when married to Charles, and was a French Roman Catholic. England feared that her Catholicism would result in a return to national Catholicism as during the

reign of Mary I, which was still remembered with great fear. This led to Henrietta becoming something of a hate figure among the public of England by the 1640s.

Oliver Cromwell, by Robert Walker
© National Portrait Gallery, London

Returning to the main subject of her talk, a pre-Civil War portrait of Charles on horseback in armour by Van Dyck was shown. Here Charles was portrayed as a military leader ready for battle. In 1642 civil war broke out and Charles was leading his troops, as depicted in 1644 in a further portrait at the second Battle of Newbury. By the end of January 1649 the regicide had taken place, illustrated by a drawing of the execution scene at the Banqueting House, believed to be by an eye witness. Eales drew attention to the vast crowds gathered, noting that there had been real fears that Charles would be released and escape his punishment.

Charles made a speech from the scaffold and in it described himself as 'the martyr of the people', a powerful phrase setting him up at that moment as a future focus of cult religion. The crowd dipped cloths and handkerchiefs into his blood, believing that it might have miraculous curative powers, in particular the power to cure the King's Evil or scrofula.

Soon cures associated with relics of Charles were believed to have taken place all over the country and many were recorded. The pamphlet *A Miracle of Miracles*, published in 1649, describes how a sufferer had been cured of the King's Evil by means of a handkerchief dipped in Charles's blood. Talk of this and other miracles spread countrywide and a cult around Charles developed quickly. John Ashburnham, a noted local man and committed royalist, later displayed in his newly-

built church (1665) on the Ashburnham estate the shirt Charles wore at his execution. It was believed that if people touched the shirt they would be cured. It remained on display in Ashburnham parish church until at least the twentieth century but is now in the Museum of London.

The cult of the Martyr King quickly became commercialised. A *memento mori* such as a ring and a locket was favoured as a discreet way of displaying loyalty to the royalist cause as well as keeping it alive. A ring with Charles's face and a skull with the date of his death and a locket inscribed 'prepared be to follow me' were shown as examples. A further example was found in a bronze medallion – it had a celestial crown on the reverse implying Charles's revered status beyond death when he would be crowned as a martyr.

The origins of the Civil War leading to Charles's martyrdom were examined next. Causes were to be found in his use or abuse of Parliament, evidenced by his eleven year rule without a Parliament, the Short Parliament of 1640 and the Long Parliament. This last witnessed the growth of the royalist party and the parliamentarian party and the start of the Civil War itself. From 1638/9 civil wars in all three kingdoms took place, first in Scotland and then Ireland, with civil war in England following in 1642. Disputes focused on the nature and extent of royal power and the roles of Parliament and of the national church and its bishops, as well as religious toleration; all the pillars of statehood were being questioned.

In 1642 Charles had attempted to arrest the five MPs leading the opposition, whose escape was immortalised by the words 'the birds have flown' – a drawing of the event was shown. Charles was subsequently forced to make a stand against parliamentary power by charging the men with treason.

A propaganda paper war followed in which pamphlets were published by both sides detailing their points of view. In 1643 Edward Husbands published all the interactions between King and Parliament in one volume. Printed propaganda leaflets

were read aloud from pulpits and in town squares by town criers, as literacy was low. Charles left London, eventually moving north to Hull where he was turned away from the Royal Armoury by Hotham, a parliamentarian.

Charles had declared war in 1642 at Nottingham, setting up court at various towns around the provinces. To fund his cause he sought donations of gold and silver plate from which he coined money by means of a travelling mint. An example of such a coin was shown, depicting Charles as protector of parliamentary liberties, calling on God to scatter his enemies.

Many petitions followed from around the country, including from Kent. The period saw 'the world turned upside-down' with all areas of life, particularly religion, affected. New religious and political groups grew up – for example Levellers, Presbyterians, Baptists, Quakers, Muggletonians – each with a different take on world and religious order.

The royalist cause suffered major losses and Charles was eventually defeated at Naseby in 1645. In 1646 he surrendered to the Scots, who handed him over to Parliament in 1647. He was under arrest from 1646 to 1649, a period during which Parliament tried to make terms with him. After an unsuccessful escape attempt from Hampton Court he was held at Carisbrooke Castle on the Isle of Wight. Despite offers of terms he refused to give up his militia, Privy Council or bishops.

Interestingly, while Charles was on the move, as well as when imprisoned, arrangements were made for him to 'cure' scrofula by means of The King's Touch. Previously medals had been struck and given by Charles to those seeking his healing at ceremonies, but these were not available while he was in prison. Instead supplicants would provide their own coins for Charles to touch and these would be returned to be held over the afflicted part of the body to effect a cure. An image of Charles II touching for the King's Evil in the Banqueting House was shown, illustrating the type of ceremony held and

showing how he had revived the ceremony, implying continuity of power from father to son.

After renewed fighting in 1648, including at Maidstone, Colchester and Preston, Parliament decided that Charles would have to be tried. He was taken from the Isle of Wight to the mainland, where faithful John Ashburnham is believed to have slept by his door to protect him from assassination. He was placed on trial at Westminster Hall in front of 130 MPs named as judges, led by John Bradshaw.

Charles regarded the whole procedure as a sham and refused to engage with or recognise the court. A drawing of the trial was shown. Eales noted that historian Shaun Kelsey has suggested that, rather than the result of trial being a foregone conclusion, Parliament was using the trial as a tactic to get Charles to give up some power. This was unsuccessful. It is known that Charles warned his younger son Henry that in the event of his death Henry should not allow anyone to make him king – that title was reserved for his older brother Charles.

Eales suggested that Charles may have felt that dying as a martyr was his best chance to preserve royal power and the monarchy.

Certainly parliamentarians took no chances – a picture was shown of Bradshaw's hat, worn for the trial, which had extensive protective reinforcements. A woman, possibly Ann Fairfax, wife of the chief of the New Model Army, protested at the start of the trial when Charles was charged in the name of the people of England, and muskets were immediately drawn.

The *Eikon Basilike*, a masterpiece of royalist propaganda, was published only hours after the King's execution. It claimed to have been written by Charles I and to reveal his innermost thoughts on his trial and the events leading up to it, putting forward the reasons for his actions. It must have been pre-prepared.

The famous frontispiece was shown, illustrating Charles kneeling, portrayed as the Martyr King, looking to heaven with the crown of England and a crown of thorns put aside to be replaced by a celestial crown. The book helped reinforce the cult of Charles the Martyr, undergoing 39 editions in 1649 alone, described as the most successful book of the century.

The frontispiece to the Eikon Basilike. The Latin inscriptions are all praising the King. That around the heavenly crown (to right) reads Beatam et Æternam *(blessed and eternal).*

The implications of the trial and execution were seen by royalists as life-changing – if Charles were not safe, no one was. In his pre-execution speech Charles argued that If Parliament could act without the King to abolish laws then Magna Carta, which enshrined the rights of ordinary people, could also be abolished.

After the death of Oliver Cromwell Parliament eventually restored the monarchy, giving the crown to Charles II in 1660. From this period Charles I was depicted as having made a considerable gesture of self-sacrifice. A post-restoration image of Charles as a martyr was shown. Churches dedicated to Charles the Martyr were opened, for example at Tunbridge Wells.

Charles's martyrdom was a conscious gesture of self-sacrifice, and that his execution preserved the monarchy from extinction, just as he hoped it would.

Georgina Doherty

HOW TO BUILD A MEDIAEVAL HOUSE

Stephen Howard Gray *21 March 2019*

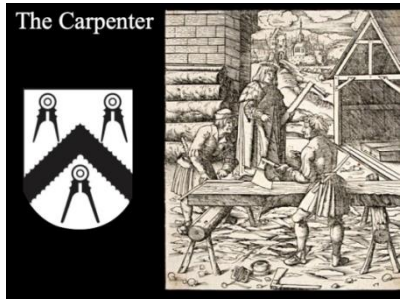
Stephen Howard Gray looked at the building process for a mediaeval house, from the felling of the trees and obtaining of building materials, through the stages of architectural design, erecting the frame, thatching and creating the walls, and finishing with payment of the bills. He then looked at how the stages of building measured by mediaeval festivals matched up surprisingly closely with modern building project planning techniques, exemplified in a Gantt chart.

Stephen began by taking as a convenient construct *mediaeval* to be 1399/1400, recognising that the term, and many building methods, dated from the very early mediaeval period, previously termed the *dark ages*. In any event there are hardly any examples of mediaeval houses surviving earlier than this. Examples of 14th-15th century houses in the area were, in addition to the Pilgrims' Rest, the Clergy House at Alfriston owned by John Heghlond and the Bayleaf Farmhouse at the Weald and Downland Museum at Singleton. Stephen also addressed at the start modern misconceptions such as that mediaeval houses were largely made from recycled ships. Nor would a mediaeval house have been built Amish-style by local amateur residents in a day; rather, the whole process took about a year and involved highly skilled professionals, among whom carpenters were of paramount importance. At the top end, carpenters often had a role similar to developers today.

A mediaeval carpenter, after his apprenticeship, would have served under a master carpenter, learning not only how to use the specialist tools, such as the carpenter's axe most commonly used in the mediaeval era to get straight edges in planks cut from a circular tree; but also the techniques of design and fractional geometry. The mortice and tenon structural joints required delicate skills to offset the holes for a tight fit. The vast majority of mediaeval roofs are at an angle of 51 degrees 54 minutes, matching that of the pyramid at

Giza: this was by design, not an accident. Window sills were almost always installed beginning with the north east corner of the house, in the tradition of King Solomon. There would have been no chimneys in a house like this in the late fourteenth century: the smoke percolated through the roof and the chimney was still some 150 years in the future.

There would have been no glass windows in most houses, although processed ox horn provided translucent blinds. But at this time there was innovation as well as tradition: at around the fourteenth century the stone plinth for structural timbers was introduced, eliminating damp rot. The carpenter assembled the whole structure in advance and then rebuilt it on-site: carpenters' marks indicated how to reassemble it. The house would have sat on the plinth held in place by its own weight (30 tons for the oak structure alone) and secured by its own carefully-engineered structure.



Stephen explained the organisation of rooms and spaces which would have guided the design, for example the creation of higher end rooms for the owner's family and lower end rooms for others. The organisation of upstairs rooms discouraged the mixing of unmarried males and females, to minimise the risk of predictable results. The steepness of the stairs would have told a mediaeval visitor about the social status of the owners: the gentler the slope the higher the social standing. The houses were not always strictly utilitarian, as evidenced by the use of stylish sweeping curved wood supports commonly seen on the outside of houses from this period. Garderobes (upper floor rooms each with a seat and a hole) were a fashionable innovation at this time. Packed crushed chalk floors had to be hardened with sour milk and urine.

Obtaining the supplies for a house like Bayleaf Farmhouse was a massive undertaking. For example, a wide range of hardwoods had to be obtained for different purposes. Oak was used, in the form of young straight mature trees, for structural timbers because its natural oil – lignin – enabled the wood to harden through creation of natural polymers after being cut and used green as was the practice for ease of cutting. Elm, ash and hazel also all had their uses in the house: elm for the boards; ash for the wattle spars; hazel for the spikes; and chestnut for the lathes. All these woods had to be identified and cut locally. The amounts needed for a house like Bayleaf were enormous, for example 30 tons of oak for the structure comprising 150 trees covering seven acres; five tons of elm comprising 20 trees; 2500 bundles of water reed for the thatch; two gross of handmade iron nails; 70 tons of daub including five cubic yards of cow manure which had to be kept moist; and 40 tons of crushed chalk.

These quantities meant that a serious issue for the mediaeval builder was to assess the availability of materials locally and adapt accordingly. For example the choice of thatch or tiles might be guided by what materials were most commonly found in the area. Even when the quantities and sources of materials had been identified, the builder then had to overcome the logistics of moving the materials to the site. The maximum weight for a horse-drawn cart was about a ton, and at two miles an hour the maximum range was about ten miles. Perhaps the most unpleasant job to modern eyes would be the treading of the clay, sand and dung mixture for the daub.

Once the building was completed, the legal formalities had to be satisfied, usually coinciding with quarterly festivals. Stephen concluded by looking at the progress and contractual aspects of a typical mediaeval house construction, based on the surviving contract between William Haute (knight) and John Brown (carpenter) for building a terrace of four houses in Canterbury in the fourteenth century.

Adrian Hall

THE SYKES-PICOT AGREEMENT

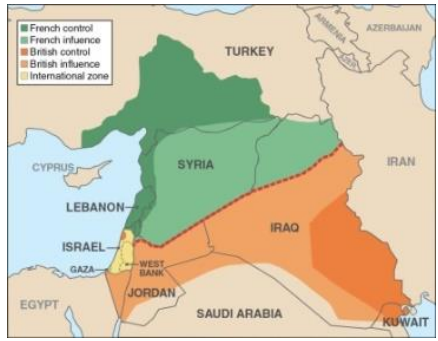
James Barr *18 April 2019*

This excellent lecture provided an analysis of continuing intrigue and rivalry between allies, including the particularly difficult period of the Second World War, and an insight into why the Middle East remains such a problem today. It was based on close research. Although there was an apparent amity and collaboration between the two main powers concerned, France and Britain, in fact there was not; and suspicion and competition led first to the end of French rule over the Lebanon and Syria and then to the defeat of the British in Palestine and the beginning of the crises there that still attract real concern in countries throughout the world.

In effect the account opened in 1915, when the British and French both hoped that it would not be long before the Ottoman empire fell after the Allied assault on Gallipoli. In that case, not only would the door open for an advance through the Balkans but the future of the non-Turkish parts of that empire would be open to discussion and, they hoped, distribution between the victorious powers. At the same time the British were beginning to seek support from Arab communities, leading effectively to a promise of independence.

The Anglo-French agreement reached is well-known under the names of its originators, Sir Mark Sykes and François-Georges Picot. Sykes was a well-travelled baronet and clearly a persuasive arguer. Given his travel record and the fact that he was an MP it was perhaps not surprising that Downing Street asked him for his advice. That set up the discussion with Picot, who at first wanted much more than he got; but agreements very often start like that.

The agreement set out the line in the sand leaving Britain, to the south, effectively in charge of what later became Jordan, most of Iraq and Kuwait, and leaving France in charge of Syria,



The original agreement. From Wikipedia

Lebanon and northern Iraq, and with a recognised influence in a large part of southern Turkey. Palestine was to be under some form of joint control. In fact it was amended later in the war, giving Britain control of Palestine and of what is now northern Iraq (a growing oil region), in exchange for Britain's commitment to the return of Alsace and Lorraine to France. When Atatürk took power in Turkey after 1919 he also took most of the Turkish area assigned to French influence.

Sir Mark Sykes (left); François-Georges Picot (right)

What was nothing like so well-known anywhere was the extent of the rivalry between the two powers. One might have thought that this had ended with the Entente Cordiale of 1904, but it did not. Despite the alliance in force during the First World War there was a continuing anglophobia among the French and francophobia among the British. Each side was deeply suspicious of the intentions of the other and worked hard to find out what they were and how to defeat them. James Barr had spent a considerable time researching the

records of the French secret service and had found many examples of spying on the British. Elsewhere there were also some records, and much suspicion, among the British about French intentions. It is likely that Walter Stirling, correspondent for *The Times* and a man of considerable experience and with many contacts, was one local informant.

But one card was held by the British: they had troops in the area, and they took Jerusalem, Beirut and, just before the First World War ended, Damascus.

Given the agreement on demarcation it is hardly surprising that T E Lawrence found himself unable to deliver what he had thought was a British promise to deliver the throne of Syria to King Faisal of the Hejaz. The French vetoed it, fearing further British influence, and Faisal had to leave Damascus. Many Arabs did not welcome the new colonial régimes, and there were risings in Iraq and the Lebanon in 1920 and, for more complicated reasons, in Palestine in the 1930s.

French antagonism to its allies in the Second World War has been demonstrated on many occasions. This was despite the fact that Edward Louis Spears, an MP and a friend of Churchill, took an unwilling de Gaulle from France more or less by force in 1940, thereby saving him to represent himself as the country's ultimate saviour.

Sir Edward Louis Spears, in court uniform 1942 (from Wikipedia)

Once more a major problem was the Middle East. The French areas – the Lebanon and Syria – turned to Vichy France in 1940 and after the fall of Crete were open to German occupation, so they were taken over by the Allies after considerable resistance.

The further argument was over the future of Lebanon and Syria. Churchill had promised independence; de Gaulle opposed it. But anything that locked Allied troops in the area would diminish their effectiveness in north Africa. Spears managed a very difficult situation and ultimately independence was granted before the war ended.

By that time Britain was having real difficulties with its League of Nations mandate of Palestine. Jewish immigration increased sharply between the wars, particularly after 1933, and although some Arabs were pleased to make money by selling land to the immigrants the great majority were put under pressure. In 1939, just at the worst possible moment, Jewish immigration was very strictly limited.

French hostility did not cease even when de Gaulle lost power after the war ended. Kept quiet if not largely secret, French support for extremist Zionist groups grew to provide a serious threat, initially by backing the Stern Group and then Irgun.

The main French contribution to the Zionist struggle was in providing arms, used very effectively against the British. The situation quickly became impossible, with the military occupation becoming indefensible, international pressure being brought to bear and the unwillingness of Zionists and Arabs to reach agreement on the future. The British withdrew and were humiliated.

The twentieth-century history of the Middle East is extraordinarily complicated, with the British and French sparring for control and often seeking the other's embarrassment; in due course both were to be expelled from the region. That did not bring peace.

The results of the Balfour Declaration of 1917 that ultimately gave rise to the founding of the state of Israel are an element that remains perhaps the major impediment to peace.

George Kiloh

WHO DESIGNED THE CLIFTON SUSPENSION BRIDGE – FACT AND FICTION

Julia Elton *16 May 2019*

For a century and more the Clifton Suspension Bridge has been attributed entirely to I.K. Brunel. In fact his bridge was left unfinished, apart from the masonry work. The bridge as it now stands was built to a different design in 1864 and was the achievement of W.H. Barlow and Sir John Hawkshaw. This lecture was an attempt to dispel the old myth.

The lecturer began by describing the development of long-span suspension bridges, differentiating these from hanging bridges which were (and still are) common in Asia and South America for crossing deep gorges and chasms. However, hanging bridges were totally unsuitable for vehicular traffic. This led to the design of the first suspension bridge with a flat deck suspended by chains, designed by James Finley in 1801 with two spans of 70 feet each, followed by a longer bridge with a single span of 244 feet over the Merrimac River, both in the USA. However, news of these developments filtered through to England only in 1811; thus suspension bridge design began there in parallel to the American work.

Suspension bridge development in the UK was begun by Samuel Brown and Thomas Telford, stimulated by government road building projects, particularly in the ambitious project to speed up mail delivery to Ireland via Anglesey. The crossing of the Menai Straits proved to be a difficult challenge because of dangerous currents, exceptional width and an Admiralty requirement for a minimum headroom of 100 feet at high water, all of which conditions obviated the use of arched bridges. A suspension bridge with a flat deck hung from an overhead suspending system using chains of wrought-iron, known for its tensile properties, was the only solution. Brown and Telford did a great deal of ground-breaking work to investigate the tensile strength of materials, laying the

foundation for the iron bridge development of the railway age.

In 1817 Brown took out a patent for a suspension bridge and went on to build the Union Bridge in 1820. It crossed the river Tweed with a span of 449 feet, and is the oldest surviving suspension bridge in the world specifically designed to take vehicles. Meanwhile, Telford was building the suspension bridge to cross the Menai Straits with a span of 580 feet, which opened in 1826. Brown went on to build more suspension bridges, such as the Montrose Bridge (span 432 feet) in 1829, while a few others were built by engineers such as William Tierney Clark, who built Marlow Bridge (span 400 feet) in 1827. The Clifton suspension bridge can thus be seen as one of the first generation of chain suspension bridges.

Until the 18th century Bristol only had a single crossing over the Avon into Somerset. It was a bottleneck, and from the 1750s thought began to be given to a further crossing downstream of the old bridge, either at low level or at a higher level across the Avon Gorge beyond Hotwells. Several proposals for a bridge were made but the width and depth of the river and the gorge proved challenging. The first idea for a solution involving a suspension bridge appeared in 1822, when the artist Hugh O'Neill superimposed an image of Brown's Union Bridge across the Avon Gorge. Following initial designs offered by William Chadwell Mylne and Samuel Brown, it was eventually decided to run a competition in October 1829 with a prize of 100 guineas.

Although the prize of was awarded jointly to William Hawkes and William Hazledine, neither of them was commissioned to build the bridge. Thomas Telford then submitted a design to obtain the necessary Act of Parliament, passed in May 1830, but designs continued to come in and two sets of shortlists were put together at the end of 1830.

In March 1831 Brunel got the job of building the bridge. However, he had to modify his design, reducing his span to

702ft by means of an enormous brick abutment on the western side of the gorge. Although the ground-breaking ceremony, presided over by the speaker's great-great grandfather the Reverend Sir Abraham Elton, took place in June 1831, the undertaking was put on hold until sufficient funds were raised; work finally started in August 1836.

However, progress was always inhibited by financial crises, and by 1842 only the abutment and the two piers of Brunel's design had been completed. By 1843 cost overruns meant that the project was short of £30,000 and work ground to a halt. In 1853 the chains were sold to the Cornwall Railway for Brunel's Saltash Railway Bridge across the river Tamar. The two lone piers, standing forlornly facing each other across the unbridged gorge, became known as 'Bristol's Folly'. The project lay dormant until William Henry Barlow and Sir John Hawkshaw set up a private consortium to finance the building of the bridge. They seized this opportunity when Brunel's Hungerford footbridge was to be replaced by Hawkshaw's Charing Cross bridge, meaning that the consortium could buy its chains cheaply.

Early engineers had always been concerned about whether the strength of wrought iron suspending chains would be able to carry the weight of a deck, seeing chains and deck as separate entities, rather than as a single structure where each component contributed to stability. This attitude began to change in the wake of several serious bridge collapses, the first being damage to the deck of Brighton's Chain Pier on two occasions in storms. Initially, the damage was ascribed to a lightning strike, but following daylight observations, the true nature of the action of violent winds began to be realised. In January 1836 on the Menai Bridge, strong undulations of the deck platform of up to 16 feet were observed in a storm; the bridge was seriously damaged by another storm in 1839 when a 175-foot section of the deck was left hanging in mid-air. Meanwhile the Montrose Bridge also collapsed in 1838 under wind loading.

William Reid, a military engineer, came to understand the wind load phenomenon, leading to the design of platforms with heavy decking and cross trussing underneath to ensure rigidity and so prevent oscillations. When the Menai Bridge was repaired, the replacement decking was 130 tons heavier than the original. It was with these engineering insights that Barlow and Hawkshaw designed the deck of the Clifton Bridge. The bridge finally opened on 8 December 1864 and is still there, unchanged, today.

Julia Elton concluded her fascinating presentation by noting that Barlow and Hawkshaw had completely revised Brunel's design, using up-to-date engineering knowledge, and noted that contemporary prints and guide books gave them due credit for their achievement. Only later was Brunel given the credit. Like his contemporaries in the early 1830s, Brunel had little understanding of suspension bridge behaviour when he won the competition and it is doubtful whether his bridge would have survived the high winds prevalent in the Avon Gorge.

Nevertheless, he became well-known because of it, getting the job of engineer to the Great Western Railway in 1833 as a result. The Clifton Suspension Bridge was one of the last to be built with wrought iron chains. After the 1860s suspension bridges used wire cables, following their use in Europe and America.

Peter Greene

D-DAY, 6 JUNE 1944: THE ASSAULT ON NORMANDY

The 75th anniversary

Brig. Hugh Willing *6 June 2019*

Shortly before dawn on 6 June 1944 a vast fleet of battleships, cruisers, frigates, minesweepers, commandeered passenger ships and converted cargo ships, accompanied by landing craft of many different sizes and types, all moved into position some ten to twelve miles off the Normandy coast and prepared to launch a flood of soldiers, armoured vehicles and artillery on to the beaches.

This was D-Day: that momentous day on which the largest combined military operation of naval, air and land forces in the history of warfare was about to begin. By midnight 156,500 men, 950 tanks and armoured vehicles, 520 field and anti-tank guns and 4,500 other vehicles were ashore. 2,800 merchant and warships were at sea off the coast and 14,000 aircraft sorties had been flown that day. Upwards of 400,000 men were on the move.

It was back in June 1942 that the two western Allied war leaders, Roosevelt and Churchill, met and made two vital decisions. First, the defeat of Germany would be their joint top priority and Japan would follow after that. Secondly, they decided that Germany could be defeated only by an invasion of northern Europe, launched from Britain as soon as it was practical to do so. And this would satisfy their Soviet Allies who had been demanding a Second Front to take the German pressure off them in the east.

In March 1943 the British Lieutenant-General Frederick Morgan was appointed Chief of Staff to the Supreme Allied Commander, abbreviated to COSSAC. He was given a small joint staff of British and American staff officers and charged with planning the invasion of northern France with a target date set for 1 May 1944.

The COSSAC staff considered two main invasion sites, but for these two key factors had to be borne in mind. First, there must be suitable beaches on which to land an invasion force. And secondly, the assault area must be within flying range of fighter aircraft based in southern England. This was to ensure there could be constant air cover over the Fleet and the landing areas, especially in the early and most vulnerable days after the invasion.

This came down to just two options: the Pas de Calais across the Channel at its narrowest point, and Normandy. They decided on Normandy and the operation was given the codename OVERLORD.

Morgan believed that it would take two weeks to capture Cherbourg, which would be a vital port to support the Allied breakout from the bridgehead. But in the meantime, the unpredictable Channel weather would make it difficult to land supplies over the beaches. So work was begun on two huge floating sectional harbours made out of solid concrete and steel called MULBERRIES, which would be towed to France by tugs. Also essential to success was a reliable and constant

supply of fuel to the thousands of vehicles which would be taken across the Channel in the invasion fleet. The solution was PLUTO – Pipeline Under The Ocean – laid across the Channel from Britain on huge drums also pulled by tugs.

But how do you assault a beach which is closely carpeted with rows of mines and other obstacles and is covered by fire from defenders in well-concealed and protected concrete defensive positions who can bring down artillery, mortar and machine gun fire on you just as you jump from your landing craft ramp into four feet of cold seawater and start to wade ashore?

In their approach to solving this problem the British and American views differed, and there was a good reason for this. Britain had already been at war for nearly five years, and manpower resources from our small island were running distinctly low even given the tremendous support from the Empire and Commonwealth. An opposed beach landing is always going to be a costly business, and the British knew that they would need every ingenious device that they could invent to avoid unnecessary casualties. The Americans, relatively new to the war and with seemingly limitless manpower resources, saw less of a problem.

The British planners decided to secure those first few vital miles of French soil with extraordinary contraptions known as *Hobart's Funnies*. Major General Sir Percy Hobart was brought out of retirement in early 1944 and allowed to let his imagination run riot, inventing a fleet of armoured vehicles which could swim, breach minefields without themselves being blown up, bridge streams, shoot tongues of flame, repair shell holes, destroy concrete bunkers and generally make it easier for the assaulting infantry to capture the beaches and press on inland as quickly as possible. All of these Funnies would be among the first men and equipment ashore on D-Day, although many were to sink due to the rough weather and from being launched too far from shore.

It is too easy to think of the Normandy landings as an Army operation, but the landings could succeed only if the Allied navies could deliver the assault troops at the right place, at the right time and in the right order.

And the scale of that undertaking was quite staggering. The beach assault landing itself required 138 bombarding warships including seven battleships, 221 escort vessels, 287 mine-sweepers, two submarines, four minelayers, a seaplane carrier, 495 motor torpedo boats, gunboats and launches, 58 other escort ships, 310 large landing ships, 1211 major landing craft, 950 small landing craft, 531 ferry-service landing barges and 1,125 additional landing craft of various sizes. After the assault a further fleet of ships comprising 423 naval vessels and 1,260 merchant ships was required to sustain the huge invasion force in their battles ashore. And all of this brought a total of 7,016 vessels required for the maritime part of the operation, which was codenamed Operation NEPTUNE.

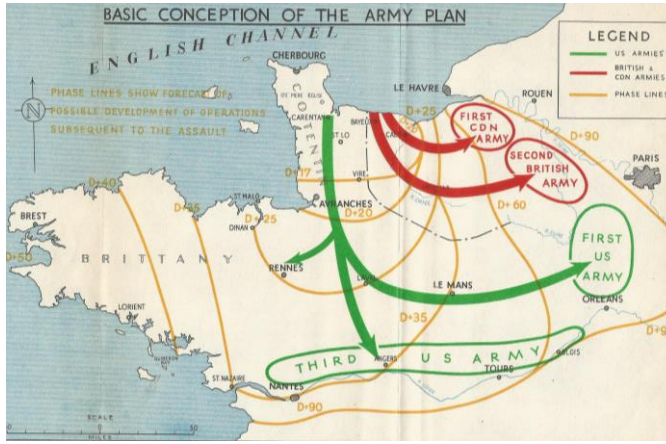
In addition to the naval plan for the invasion, a comprehensive deception plan, codenamed FORTITUDE, was designed to convince the Germans that first, the Pas de Calais was the main area for attack, and secondly that the Normandy invasion was simply a diversion.

In December 1943 the American General Dwight D Eisenhower was appointed to Supreme Commander. Under him the three officers who would command the Navy, Army and Air Forces would all be British: Admiral Sir Bertram Ramsay, General Sir Bernard Montgomery and Air Chief Marshal Sir Trafford Leigh-Mallory.

To set things off Montgomery had been very critical of the initial COSSAC plan. He felt they had allocated too few troops to the initial attack and insisted that five Divisions must form the first wave, which would be lined up from east to west as British, Canadian, British, and two American.

He also agreed that the flanks would need to be protected by three airborne divisions, and these were the British 6th Airborne Division which would land in the east and the two US airborne divisions, 82nd and 101st, which would be dropped in the west at the foot of the Cotentin Peninsula itself.

The deception operation FORTITUDE soon gained momentum, persuading the Germans that an American Army Group under Lt-Gen George Patton was in southeast England ready for a landing in the Pas de Calais.



From Field Marshal Montgomery: From Normandy to the Baltic

As for the Germans, they knew that an invasion must surely come and had rightly guessed that it must either be in Normandy or the Pas de Calais area. But back in 1942 Hitler had ordered the building of some 15,000 strong points which were manned by 300,000 troops to form his ‘Atlantic Wall’.

The German forces in France and the Low Countries were under the overall command of the Commander-in-Chief West, Field Marshal von Rundstedt, and this comprised Army Group G in Southern France and Army Group B under Field Marshal Erwin Rommel. It was Rommel’s 7th Army, 130,000 men strong, which held Normandy. Rommel was convinced that the invasion would have to be stopped on the beaches by

destroying the Allied landing craft before they could unload. And for the Allies and the Germans alike the first day would be the longest.

But von Rundstedt disagreed with Rommel. He felt it would be best to hold the German Divisions back from the beaches and then attack in strength at the beachheads once these were known to be either in Normandy or the Pas de Calais area. The argument was made all the more complex by the fact that almost all the German armoured divisions in Normandy could not be moved without the personal authority of Hitler himself.

No plan survives contact with the enemy, and this was certainly true of Operation OVERLORD. The first thing to change was the date for D-Day itself. Bad weather forced Eisenhower to postpone the invasion for 24 hours and even on 5 June the weather forecast was uncertain.

Early that morning Eisenhower took the brave decision to go ahead with the landings on 6 June, which would become the infamous D-Day. Almost 5,000 ships set out and some 23,000 paratroopers and glider troops prepared to board their aircraft.

The first strike was made shortly after midnight on 6 June when the 2nd Ox & Bucks landed by Horsa gliders and secured the bridges over the Caen canal and the River Orne just north of Caen. Shortly afterwards the airborne divisions began to arrive, and although they were widely spread with some men lost in the sea or flooded rivers and marshes their arrival helped to confuse the German commanders. The German response was not helped by the fact that Rommel was on leave in Germany.

The British and Canadian landings on GOLD, JUNO and SWORD beaches, as they were nicknamed, went much as planned although exploitation inland was somewhat disappointing as the British 3rd Division in the east failed to capture the city of Caen, which was their first day's objective. Caen was to

remain the focal point for a series of battles throughout June, July and into August.

Meanwhile the American landings on UTAH beach went well but at OMAHA the Americans ran into a strongly held German defence. Most of their amphibious tanks were swamped offshore in rough seas and casualties were particularly high as they had opted not to take the equivalent of Hobart's Funnies to break through the initial German defences. So it was here that the heaviest fighting and greatest losses were incurred on D-Day itself, before the Americans were able to gain a toehold.

However, the results of D-Day were impressive enough. Over 150,000 Allied soldiers were ashore and the expected German counter-attack had failed to materialise. Even Rommel's 21st Panzer Division, dangerously close to SWORD beach and the British 6th Airborne Division, had not been committed until it was too late.

Over the days that followed the Allies linked up their beachheads, and while the Americans swung up the Cotentin Peninsula towards Cherbourg, Montgomery made the first of his several unsuccessful and costly attempts to take Caen.

Fighting in the close and hedged bocage country favoured the defender and it wasn't until the very end of June that Cherbourg fell to the Americans, but its harbour was so thoroughly damaged that it took months to repair.

So the battle for Normandy did not go as planned for the Allies. Instead it dragged on for two months because the Germans devoted most of their effort to holding Caen, committing their badly-needed armoured reserves to this area of the battle front.

As a result the German forces facing the American landing beaches further west were spread thin, relying on the rough

terrain of the bocage country to slow down the American advance. With so many German divisions held up defending Caen, the American forces were eventually able to break through to the south and east, threatening to encircle the German forces in Normandy from behind.

In conclusion, the characteristics of the battle for Normandy are now clear after years of analysis. The Allies enjoyed superior numbers and resources, and their air power played havoc with German units attempting to move about the battlefield. But the Germans remained resolute in their defence and by early July the allies were concerned that their invasion seemed to have become stuck.

The losses on both sides, which resembled those of the Western Front in World War One, were 61,700 Allied casualties and 80,000 Germans. And by the time Paris was eventually taken at the end of August 1944 the Allied losses were 209,672 of whom 36,979 had been killed.

The planning that went into Operation OVERLORD was a marvel: co-ordinating and training the troops, procuring and preparing the ships, weapons and equipment, deceiving the Germans into believing the attack would be launched elsewhere, and most of all perhaps, actually managing to keep the plans secret to the extent that the German forces were taken completely by surprise when the attack was finally launched.

Seventy-five years on, the invasion and its human toll are still very much in evidence. The remains of the two temporary Mulberry harbours are still there. And of course, many of the troops arriving to liberate Europe never made it beyond the beaches and are buried in the immaculate military cemeteries that are tangible and sobering evidence today of the sacrifice made to liberate Europe from the Nazi tyranny.

Hugh Willing

THE FIRST MOON LANDING: THE UNTOLD STORY

Dr David Baker *18 July 2019*

Dr David Baker is a well-known authority on the international space programme, having worked on the Apollo moon missions and on NASA's space shuttle. He is a Fellow of the British Interplanetary Society.

Taking for granted widespread knowledge of the moon landing itself, Dr Baker set out to describe aspects of the programme that are less well-known – the historical background, the human experience and the lateral fall-out. The Apollo moon missions originated within the Cold War; indeed, what became known as the space race was, he thought, the biggest battle of the Cold War, albeit one fought without a shot being fired. NASA itself – the American National Aeronautics and Space Administration (sometimes interpreted as Never A Straight Answer) – was formed in 1958 by President Eisenhower in response to the Soviet Union's successful launch of the first space satellite, Sputnik 1.

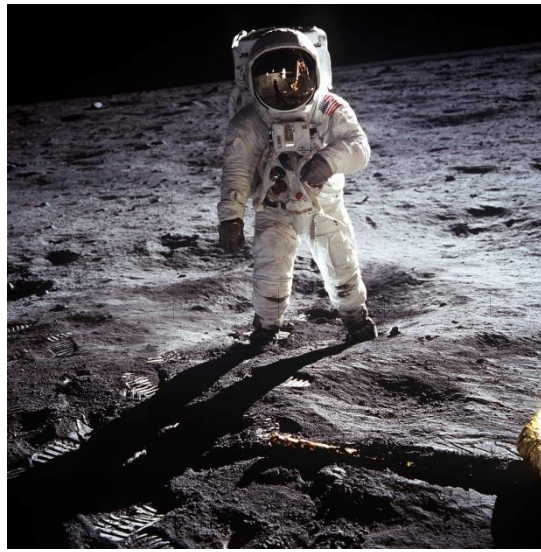
In April 1961 the Soviet Union launched the first man into space, Yuri Gagarin. He was followed a month later by the first American, prompting President Kennedy to announce that

The Moon seen from Earth

America would seek to put a man on the moon.

Two years later, in response to lack of progress, NASA underwent major structural

and managerial change, primarily the import of 170 US Air Force officers experienced in the management of large-scale projects and systems design. By the time President Kennedy was assassinated in November 1963 NASA was employing 350,000 people, including a significant number of British and Canadian scientists and engineers (without whom, NASA's chief claimed, the moon programme would not have succeeded). By the time of his death, President Kennedy was looking to reduce the burgeoning costs, partly by getting the Russians to share the programme. Between 1958 and 1963 NASA's budget rose from $100m to $5.2bn. As a portion of total US federal expenditure, the space programme represented 1% in 1962, nearly 4.5% in 1966 and about 0.5% now. Ironically, Kennedy's death had the effect of prompting President Johnson to maintain the momentum, with strong bi-partisan support from Congress which, for once, did not seek to interfere.



Neil Armstrong's famous picture of Buzz Aldrin (NASA)

Dr Baker was at pains to point out that, despite the competitive Cold War origins of the space programme and the strong sense among its founders that it was an expression of

support for democracy and freedom, it was and remains an international venture. He stresses to Russian colleagues and friends that 'We all did it' – if Russia hadn't put the first satellite in space, America would not have responded. The regularly-used Soyuz space shuttle is Russian and the international space station comprises more components made in other countries than in America. Since the turn of this century there has never been a day without someone, from a variety of countries, in space. At the height of the space programme 90% of NASA's budget went to those who designed and built the rockets and vehicles, a largely American but always international workforce. As one of many Britons he was not made to feel like an expatriate, while the planting of the Stars and Stripes on the surface of the moon was not an assertion of ownership but an acknowledgement of those whose taxes paid for the programme.

There was a setback in 1967 when a faulty Apollo rocket caught fire, killing its crew of three, but improvements were made and the first manned flight was successfully executed in 1968, as was the first flight to the moon. The landing itself was achieved by Apollo 11, launched on 16 July 1969 and landing, as is well known, four days later on 20 July.

The Saturn rocket that powered it weighed about 3000 tons, was the height of St Paul's and packed a punch of about 200m horsepower. Since the moon moves at several thousand miles an hour, the complex calculations needed to land on it were likened by Dr Baker to firing a bullet from Los Angeles at a baseball circling over New York. There were a further six landings during the ensuing three years.

The lateral fall-out, or spin-offs, from the space programme have been more consequential than most people realise. The now-ubiquitous integrated circuits were developed for Apollo and in the 1990s the network of satellite surveillance developed by NASA was responsible for early indications of global warming, specifically in identifying the thinning of the

ozone layer, the increase in carbon emissions and the greenhouse gas effect. Hydrogen fuel cells were developed to power Apollo, a development continuing now as a more efficient and environmentally friendly means of powering cars than battery power. (In an aside, Dr Baker claimed that mining lithium for batteries is environmentally damaging, is dependent upon African child labour and is partly why the costs of producing and running electrical cars is about three times that of petrol cars.) It is estimated that the overall benefits of the space programme, expressed in monetary terms, are worth about ten times the expenditure.

The programme also led to greater understanding of what we – the earth – and the moon are. The 160 man-hours or work on the moon's surface yielded 841lbs of moon-rock, distributed to scientists all over the world. The earth was formed about 450bn years ago and the moon about 3.9bn years ago as a result of a large asteroid colliding with the earth. Bits of what became the moon are still present on earth while the moon itself comprises about 50% earth and 50% asteroid.

The earth is the only planet in the solar system with moving tectonic plates, the early movements of which were proportional to the gravitational influence of the moon when the earth was cooling. To this day the earth's electromagnetic field is influenced by a full moon, in that we are directly connected by an electrical current which can be sensed by some human brains and by some animals. It may also affect plants. Essentially, said Dr Baker, 'We are here because of the moon.'

But we won't be here forever: the moon and the earth move a few inches apart every year. The earth's rotation, now 24 hours, was once five hours and will be about 40 hours in a billion years. By that time the sun's energy will have increased ten-fold, boiling our oceans and killing us. In four billion years there will be nothing here, no sun, no earth, no moon.

Meanwhile, the space industry continues to flourish, although often little-noticed.

It is worth about $450bn per annum and is the fastest-growing industry within the UK – Europe's largest satellite manufacturer is in Stevenage. The British Interplanetary Society, whose magazine Dr Baker edits, is the oldest such society in the world, dating from the 1930s. Space suits it designed in the 1930s were the model for suits used during the lunar landings.

There are six lunar modules still on the moon and the instruments left there returned data for seven years, receivable by any receiver station anywhere on earth. Working on the surface of the moon was physically hard, with astronauts typically spending about nine hours on it, some losing fingernails because of the tightness of their suits. Moon dust is like damp gunpowder. It clung to the astronauts' suits and may have had long-term health effects.

In answer to questions, Dr Baker confirmed that no signs of extra-territorial life had been identified by the space programme, though there were phenomena that were not understood.

Young people joining the space industry now were enthusiastic and academically well-qualified, though sometimes lacking the practical, hands-on experience of their predecessors who might have spent their spare time stripping engines rather than sitting in front of computer screens. In this new phase of the programme, greatly to be welcomed, we should aim to recover the individuality and inventiveness of the early NASA days.

Alan Judd

THE RESEARCH GROUP

This year the group has met four times and in between there has been quite a bit of e-mailing and some telephone calls, particularly when a draft paper was circulated for comment. Peter Greene joined the group this year and has been particularly helpful on the imaging and photographic front, proving high quality images for our publications to *Collectanea* and elsewhere. He has also worked with BDHS member Michael Hodge to make a short film of Battle in which BDHS member Alan Judd discusses the 1066 battle and the Abbey with Natasha Williams of English Heritage.

A distraction this year has been the very worthwhile involvement of four out of the group of seven in setting up and getting live the BDHS Digital Archive, which is covered elsewhere. A further distraction has been some involvement in helping development of a 'Local Listing' policy and survey for Battle Town Council. The Society has also been in dialogue with its equivalent society at St Valéry-sur-Somme and the group has suggested some topics of mutual interest for joint work. Peter Greene is continuing this dialogue which is slowly progressing.

Keith Foord and Neil Clephane-Cameron were asked once more to make presentations during the October 2018 Battle of Hastings Re-enactment and Keith was 'persuaded' to join a panel discussing the role of women in early mediaeval England. In January 2019 the group presented papers to the Society meeting. Neil talked amusingly and informatively about the terrible hygienic conditions in Battle reported in 1850 (see *Collectanea* paper E2.1 and page 25 above). This was followed by Keith promoting the BDHS Website and *Collectanea*, including a mini-quiz with small bars of Kit-Kat as prizes, and Gina Doherty giving an update on the Digital Archive.

This has not stopped us from producing more papers to publish online, such as a review of Canadia (off London Road),

a new review of the gunpowder industry in the area, a critical look at the various 'Rolls of Battle Abbey', studies of the St Mary's Croft area (off Battle Hill), Brightling and the Fullers, Vicary's garage and the Seymour Family, Claire Sheridan, the Adeane family, Socknersh Manor, clock-making in Battle, a history of Employment in Battle, other religious houses of eastern Sussex (entitled '*Not Just Battle Abbey*'), and the Ticehurst and Dannreuther families.

We have also discussed consolidating some papers into books and the first fruit of this is an edited and added to collation into book form of (mainly) Keith's papers on eastern Sussex from 1067–1538, spanning the period after the Conquest until the Dissolution of the Monasteries. This forms a sequel to Keith and Neil Clephane Cameron's book *1066 and the Battle of Hastings – Preludes, Events and Postscripts* and we expect that this will be published by BDHS as *Conquest to Dissolution 1067-1538* by the end of September 2019. To save paper and to keep the price down the appendices to this book will be published on-line in *Collectanea*.

Other books may well follow, some focussed on the period 1830 and after, authored/edited by members of the group with the series provisionally to be called *The Making of Modern Battle*. Although not actually published by BDHS we should note that group members Adrian and Sarah Hall edited *Battle at War 1939-45*, a collection of oral and written memoirs of World War II by Battle citizens, published by Ex-Libris Press in conjunction with Battle Museum of Local History. They promise us that we should be able to expect some spin off papers for *Collectanea* in due course.

Keith Foord

Research Group Members: Neil Clephane-Cameron, Gina Doherty, Keith Foord (chair), Peter Greene, George Kiloh and Adrian and Sarah Hall. Please talk to any of them to discuss joining this active group.

LECTURES September 2019 to July 2020

All lectures will be in the Wynne Room of the Memorial Halls except that in June 2020 it will be in the Main Hall

Thursday 12 September 2019
Mrs Pankhurst's purple feather
Ms Tessa Boase

Thursday 17 October 2019
Commemoration Lecture
19th century naval defences in the British Empire
Jonathan Coad

Thursday 21 November 2019
Origins of East and West Sussex
Christopher Whittick, Vice-President

Thursday 5 December 2019
Richard Moore Memorial Lecture
Henry VIII's gangster
Dr Robert Hutchinson

Thursday 16 January 2020
Writing a biography of William the Conqueror
Professor David Bates, President

Thursday 20 February 2020
Thomas Brassey 1805-1870
Ms Lucinda Fraser

Thursday 19 March 2020
Landscape of conquest: the Normans in southern Italy
Dr Leonie Hicks

Thursday 16 April 2020
Fatal colours: the Wars of the Roses, leading to the battle of Towton

George Goodwin
Thursday 14 May 2020
Springford Memorial Lecture
Mrs Thatcher's secret wars
Professor Clive Bloom

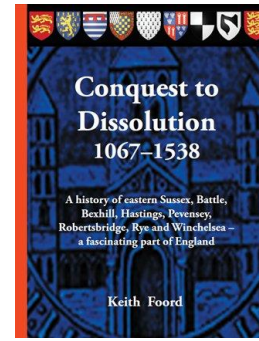
Thursday 18 June 2020
Ministry of ungentlemanly warfare
Giles Milton

Thursday 16 July 2020
Robertson Memorial Lecture
Turkish pirates in Kent in the 17th century
Professor Jackie Eales

78 High Street, until recently Jempson's café. Not currently a Listed building.

PUBLICATIONS OF THE SOCIETY AND OTHERS

(Income from all sales other than through commercial outlets is to the Society's funds)



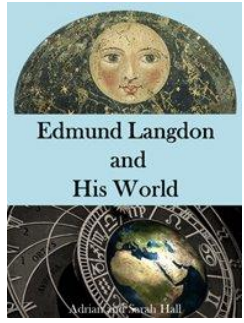
Conquest to Dissolution 1067–1538: A history of eastern Sussex, Battle, Bexhill, Hastings, Pevensey, Robertsbridge, Rye and Winchelsea – a fascinating part of England, *by Keith Foord*

In 1066 eastern Sussex was the beachhead for the successful invasion of England by William II of Normandy. He was crowned William I of England at Christmas 1066 and 1067 was the first year of the normanisation of England. 1538 saw the dissolution of the major monasteries and abbeys including those of Battle and Robertsbridge, and the start of the English Reformation.

How did William and his successors, from the Houses of Normandy and Blois via the Angevin and Plantagenet kings, through the Wars of the Roses and the rise of the Tudors change eastern Sussex? Most of the history is hidden away in ancient documents, but some remains visible in the ruins of old abbeys and castles and in the landscape itself.

The ways in which Battle and all of eastern Sussex evolved between 1067 and 1538 are covered in this book. It also acts as a guide book to further reading about the more complex issues.

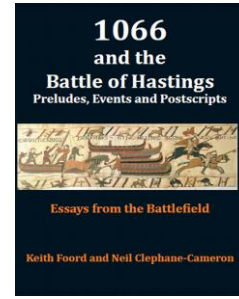
The book is the sequel to the well-regarded *1066 and the Battle of Hastings – Preludes, Events and Postscripts* as part of the 950th commemoration of 1066. *£15 + p&p if outside the UK (£3 Europe, £6 elsewhere). Members £12 for direct sale to members for £12, p&p £3 extra.*



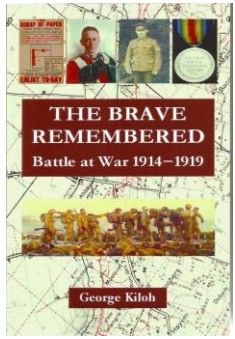
Edmund Langdon and His World, by Adrian and Sarah Hall, an investigation into Edmund Langdon of the seventeenth century, a doctor of physicke and astrologer, and one of Battle's more unusual characters.

£10, available at BDHS meetings or by contacting the authors.

1066 and the Battle of Hastings – Preludes, Events and Postscripts by Keith Foord and Neil Clephane-Cameron, takes a fresh and logical view of the historic, dynastic and political factors which brought Harold and William to their epic encounter. A 'best seller' at Rother Books, English Heritage's Battle Abbey shop and at Battle Museum. Packed with facts, interpretation and illustration, the work draws on the best analyses and contains many original new maps and diagrams of the mediaeval coastline. *£14 + p&p if outside the UK (£3 Europe, £6 elsewhere). Members £12.50 at meetings.*

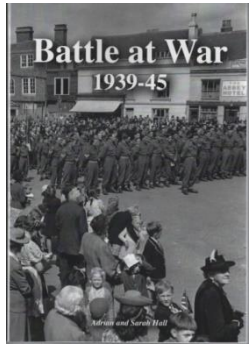


Available from some on-line booksellers.



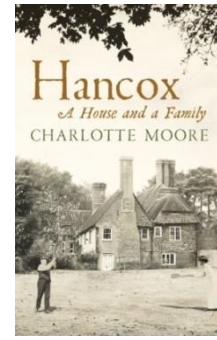
The Brave Remembered by George Kiloh, published 100 years after the outbreak of WWI, is a poignant and deeply researched book, giving a local but very typical picture of the effects of the Great War on a small town. Against a compelling illustrated account of the progress of the War, the book tells the story of some 500 Battle men who served in the Great War. The stories include men from all walks of life, be they the heir to the last baronet of Battle Abbey or a labourer who gave his address as 'in a barn'. *£12.50 + p&p if outside the UK (£3 Europe, £6 elsewhere). (Members £10 at meetings).*

OTHER HISTORICAL BOOKS BY MEMBERS



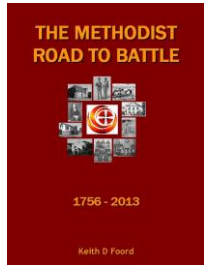
Published in March 2019, **Battle at War 1939-45**, edited by Adrian and Sarah Hall, is sponsored by Battle Museum of Local History. This year is the 80th anniversary of the outbreak of WW2 and the book is intended to give a flavour of what the town was like then, including accounts of their memories from individuals. It is on sale at BMoLH and Rother Books. The book may be mail-ordered from the Museum by a cheque payable to Battle Museum of Local History for £10.50 and sending it to: Battle at War, Battle Museum, The Almonry, High Street, Battle, TN33 0EA.

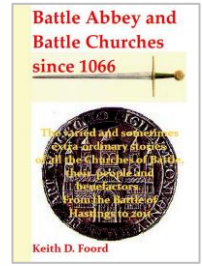
Other recent history books by members include Charlotte Moore's **Hancox** which is the story of five generations of her family and of Hancox, a house in Whatlington. It is a complex but riveting story. The book is widely available from booksellers. Charlotte has also written some historical biographies for children about William the Conqueror, Elizabeth I and Florence Nightingale.

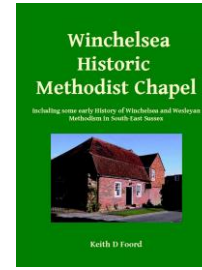


There is also a series of books by Keith Foord. The first is about the churches of Battle, including details of the demolished Battle Abbey Church and all the churches that have come and gone or stayed since Battle Abbey started to be built in 1070. The second book covers the interesting story of the two-pronged development of Methodism across eastern Sussex, discussing Wesley's strong interest in the very east and then the role of Napoleonic-era soldiers to the west. Finally there is a small book about the Methodist Heritage chapel at Winchelsea. Wesley preached from its pulpit and also gave his very last outdoor sermon in this delightful small town.

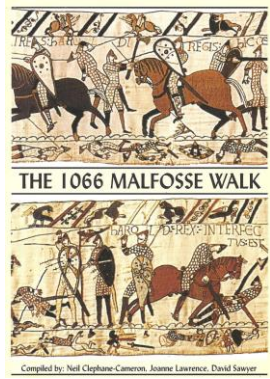
Keith's books are all available from Waterstones to order. Also see Battle Methodist Church *www.bmc.btck.co.uk/History* or directly on request by email to *battlemethodistchurch@btconnect.com* or phone 01424 777029. The books may also be purchased at Rother Books in Battle, Waterstones Hastings and the Rye Bookshop, and the Battle Churches book is also available at the English Heritage shop at Battle Abbey. *[See next page]*

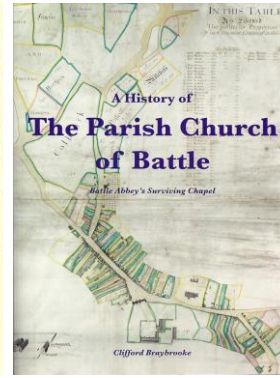






Other books still available through the Society are Neil-Clephane-Cameron's book **The 1066 Malfosse Walk** and Clifford Braybrooke's book which is an in-depth history of St Mary's Parish Church, Battle. Please enquire as to details of availability and costs of these.





In the past the Society has published other books, now out of print, but they may be available from second-hand booksellers: