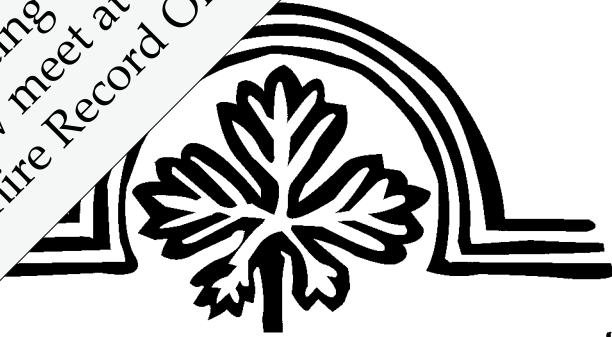


New Meeting Venue
We now meet at the
Hampshire Record Office



WARG

Newsletter

July 2011

✿ News ✿ Meeting Reports ✿
✿ Traveller ✿

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The WARG Newsletter provides reports on the activities of WARG, the society for Winchester archaeology and local history. It also carries other information of interest to the WARG membership.

For more information on WARG, and to join, call 01962 867490, e-mail membership@warg.org.uk or visit www.warg.org.uk

Chairman's notes and news

Archaeology has been in the news recently, and not in a good way. Firstly we have the spectacle of the leader of Fenland District Council, developer Alan Melton, declaring that PPS5, (Planning Policy Statement 5: Planning for the Historic Environment) was no longer relevant in his district – meaning that developers would no longer be required to carry out any archaeological activity, “Common sense will prevail...the bunny huggers won't like this but if they wish to inspect a site, they can do it when the footings are being dug out...This will stop the stupid requirement of having to strip a whole site” He has publicly pulled back considerably from that stance, after apparently being slapped down hard by the Communities Secretary.

The South Yorkshire Archaeology Service is to undergo cuts, and there are stories about falling numbers of professional posts in the commercial units as the recession bites. This is sad, because it shows that there is still a large body of opinion that regards our past as somehow a luxury.

Big dig

In the meantime, we are just on the verge of embarking on our summer dig. Come down to St Elizabeth's Mead, (College Walk – opposite Winchester College's New Hall). We are very grateful to the Headmaster of Winchester College for not only giving us permission to excavate the site, but also for a grant that will go a long way to defraying the costs of the dig.

New Meeting Venue

We are moving our venue for meetings. Instead of Peter Symonds we are now going to meet at the Hampshire Record Office. There is plenty of parking, and it's closer to many members homes, so making it possible for them to walk. The programme for 2011/2012 is over the page, and there are some very interesting talks.

40 years on

As many of you will know, WARG was founded in 1972 so next year, 2012, is our 40th anniversary. As a result, your committee is organising quite a few extra events of varying kinds. We shall be sending out the first of the application forms in the November Newsletter, and when you receive them, remember that, as several of them will limit the numbers who can attend, you'll need to send in your booking form as early as possible – WARG members are an

enthusiastic bunch and our events do fill up very promptly!

Once again we ask you all to search through your belongings (and the attic!) and come up with any photos or archival paperwork you can find about WARG. Julia's trying to gather together an interesting and comprehensive archive for our society but has many gaps, particularly for the years of the last century. It would be good to have as full a collection as possible so that those of us who joined more recently can see and understand the importance and relevance of WARG to the Winchester area heritage.

Treasurer wanted

Techer has said that he would like to hand over the treasurer's post at the end of the WARG year on 31st March 2012. Since he has officially retired he is getting busier and busier, especially with the logistics of the dig, so he feels he would like to pass on the baton.

He says, "There isn't anything complicated about being WARG's treasurer. Basically I do everything on two spreadsheets. One is a record of members showing who has paid their subs and who hasn't. From time to time I let Julia know who hasn't paid and she does the chasing! Now about 70% of members pay their subs by standing order and this has made life much simpler. The other spreadsheet is a record of income and expenditure and the balance sheet. I bank cheques, pay the speakers and other bills. For each Committee Meeting (three a year) I produce a short financial report and also project how our finances will look going forward. If we have an excavation I insist that the Dig Committee have a pre-agreed budget and hold their feet to the fire. The other task is to write to new members welcoming them and sending them the latest newsletter. When I took over from David Lloyd I think we had about 100 members and he kept the books in immaculate copperplate hand-written ledgers. I'm afraid Excel isn't so pretty but it is effective when you have 250 members. Obviously I'm very happy to train up my successor who will undoubtedly look at my spreadsheets and say... "That's pretty quaint. There's a much better way...." If you want to know more, give me a call."

Techer's phone number is 01962 777355 or you can mail him at treasurer@warg.org.uk

Dick Selwood

2011/2 Meeting Programme

- Sept 10: **Leper Hospital Excavation Visit** – (Sorry, full up)
- Sept 12: **The Unreliable Evidence of Photography:** Dr Martin Parsons (University of Reading) will talk about how the camera can be used to alter the truth.
- Oct 10: **Early Roman Quarrying and Building Stone Use in Southern England: a Geological Perspective**
Dr Kevin Hayward (University of Reading) will tell us about this fascinating subject.
- Nov 14: **“It Seemed a Good Idea at the Time!”**
Alan Hurd (Hampshire Industrial Archaeology Society) will provide details of many inventions which never quite made it!
- Dec 12: **The Pennington Saltworks**
Karl Macrow will speak of his involvement with the New Forest Park Authority during recent work on the sites of the Salt Industry in the Lymington area.

2012

- Jan 9: **New Year party:** Members only.
- Feb 13: **The History of the Winchester Police:**
Chief Inspector Clifford Williams will give us a full report on the local bobbies.
- Mar 12: **The Strawberry Industry in Hampshire:**
George Watts (Hampshire Field Club) will tell us of this once-important local industry.
- Apr 9: **Big Dig 2011 Round-up** (and AGM)
- May 14: **TBC**
- June 11: Event to be announced
- July 9: Event to be announced

Don't forget: **All meetings are now in the cinema at Hampshire Record Office in Sussex Street, Winchester starting at 7.30 pm.**

Cathedral Precinct Walkabout

Dr. John Crook, Cathedral Archaeologist, led nearly fifty WARG members on an amazing tour of the Cathedral environs on a sunny evening in June 2011. He is able to picture the monastic buildings as if they were still standing and endeavoured to recreate them as we walked around the precinct.

Roman remains

Information about the Roman site was gained in 1931 with the founding of Pilgrims school and during the building works of 1933, Sidney Ward Evans excavated many Roman artefacts from under the new dining hall. These artefacts were mounted and labelled in display cases, which are housed in the school, and include shards of Samian ware, the remains of domestic animals, pieces of a Roman mortarium and ancient British pottery labelled 50 BC to 1st century AD. A Roman mosaic pavement was discovered in Dome Alley and is displayed under the bookstall in the Deanery porch, whilst excavations for the new Cathedral Visitor centre reached Roman levels.



The Saxon Monastery

In 963 AD Bishop Athelwold was in charge of monastic reforms but John cannot state where the Saxon buildings were situated as planning in the 10th century was not as rigorous as later on.

The Norman Monastery

From 1066 onwards the evidence can be authenticated as the outline of a monastery was laid down.

Cloisters: The Bishops spent money remodelling the Cathedral but the monastery was not rich enough to create a splendid gothic cloister as seen in Gloucester, Worcester or Norwich. Instead the cloister was rather primitive and markings on the south wall of the nave show where supporting struts were affixed. The great cloister was for monks' use only, with Bishop Curle (1623-1647) creating the entrance between the Cathedral and cloisters in order to gain easier access. Note the pointing finger stating (in Latin) "this way to pray, this way to walk."

Chapter House: Three Roman oolitic pillars and one Quarr limestone pillar were reused to create the entrance. There were steps up



to the central doorway and a carved out area denotes the position of the back of a wooden seat for an “on guard” monk. Holes in the pillars supported roof struts creating a covered walkway from the Deanery to the Cathedral via the now blocked Wykeham door.

Dormitory: Now the site of the Dean Garnier gardens this was built over an undercroft and vestigial evidence can be seen. The **reredorter** (monastic toilets) was just to the right of the dormitory.

The **Hordarian’s range** (or cellarer) and his house were situated along the western edge of the great cloister. The Education Centre is a 19th century reconstruction on the site of the monastic **Kitchen**. The **Refectory**, of which nothing remains, ran along the southern range.

The little/outer cloister was more public and housed the **Almshouse** and **Infirmery**, the Judges’ lodgings are on the site of the latter. Pilgrims School is housed in the **Guest Hall** and **Guest Master’s House**, once a 6 bayed medieval hall, which has a magnificent hammer beam roof dating back to 1310. The head of King Edward II (1307-1327) is carved on the end of the hammer heads. The **Stable Block** now houses the school’s music rooms.

The **Prior’s House** was preserved as the Deanery, the arched entrance porch, from the early 13th century, being down at the original ground level. On the left was the **Great Chamber**, where the Prior slept.

The Reformation 1538

The Dormitory was destroyed but senior monks were allocated to new positions, Prior Basing becoming known as Dean Kingsmill, and the Sub-Prior, Hordarian and Guest master were allowed to remain in their homes. Twelve canons occupied the houses of thirty monks whilst other monks became Lay Vicars or porters. No-one was thrown out onto the streets!

The Restoration 1660 and onwards

More rebuilding in the Close occurred when the houses of Dome Alley were erected in 1665, being mirror images on each side of the road; a Thomas Colley, brick burner, carried out his craft in the Close

to make the bricks for the houses, with old Tudor moulds being used to cast the wonderful lead drains and pipes. The Long Gallery of the Deanery was created in 1680, its rear facade was altered in the 17th and 18th centuries, Godson's map of 1750 shows the layout of the area at this time. Number 10, The Close was constructed in 1805 with some vestigial evidence of the older building still remaining, whilst the cash Office at Number 9 was rebuilt in the style of Canon Lewis' house of 1660 with mullion windows on the ground floor. Its facade, facing Dome Alley, is a prime example of alterations over time!

Conclusion

John came to Winchester to teach at Pilgrims School, in 1981 the school was celebrating its 50th Anniversary and John decided to write a book of anecdotes; needing more material he investigated the hammer beam hall, where he sat every day for Assembly. Studying the timber work and masonry of the hall started his career as an eminent and distinguished archaeologist and for that we are extremely grateful.

We were taken to areas where the public do not normally venture and if you missed the walkabout you missed a real treat, thank you John for your enthusiasm and time.

Valerie Pegg

Domesday re-loaded

In the mid-1980s the BBC attempted an ambitious project to produce an up-to-date version of William the Conqueror's Domesday Book, his state of the nation document. This time all the data gathered from around the UK was stored on laser discs but their disadvantages were the cost, the storage required for them, and the information was soon out of date. The project has now been resuscitated and can be found on www.bbc.co.uk/domesday

It comprises over 145,000 pages of text and includes over 23,000 photos. It can be searched either by location or by keyword. It is of course a fantastic time capsule of life before the internet took over our lives and can even be updated to be accurate and relevant for 2011, with additional photos being added so that a "Then and Now" gallery will surely be fascinating. Any contributions or updates need to be in by the end of October, so you've got plenty of time if you're interested in the project. There's plenty of information on the site so why not have a peek!

The History of Submarines

David Ottley from the Royal Navy Submarine Museum at Gosport (Haslar) was our guest for the May 2011 evening talk. An ex-submariner himself, David had served on both conventional and nuclear submarines before his retirement.

David was to give the audience the complete history of submarine development, both internationally and how it happened in the Royal Navy, together with a run through of the different types of submarine employed.

The concept of a submersible boat had been around since 1579 when such a device was described by Bourne in "Inventions & Devices". The basic design centred on controlling the ingress of water to displace air and has been the basis of all submarine design ever since.

The first true submarine was designed in 1774 by one John Day, a Suffolk shipwright who had a bet that he could sink a sloop off Plymouth Hoe. The craft failed due largely to a lack of understanding of the effects of water pressure.

But by 1776 the American War of Independence had brought about further development and the first, unsuccessful, attack on a ship by a submarine. The device, designed by Ezra Lee, an Army sergeant, placed a gunpowder charge into the hull of the Lord Howe battleship. It didn't work however, and Lee nearly suffocated due to CO₂ poisoning.

In 1864, with the US Civil War, a further attempt in Charleston Harbour was more successful with explosives attached to a boom forward of a steam driven submarine. The explosion sank the target ship but also killed the submarine crew for unknown reasons. Its raising in the 1980's shed no light on the reasons why.

There were obviously aspects of the science of submersibles which were not understood, and would require new technologies. In the 19th century, neutral buoyancy and how to control it were understood but propulsion was still a problem – manpower produced the deadly CO₂. The invention of the battery by Volta and the dynamo by Faraday began to address such problems and Daimler's 4-stroke enabled submersibles to use an engine on the surface and batteries underwater. Though as late as 1879 Bill Garratt had experimented with steam, but his craft had sunk on its maiden voyage from Liverpool to Portsmouth.

The British Navy (Admiralty) had actively discouraged experimentation and design, though William Pitt considered purchasing a design by William Fulton. But when the idea was

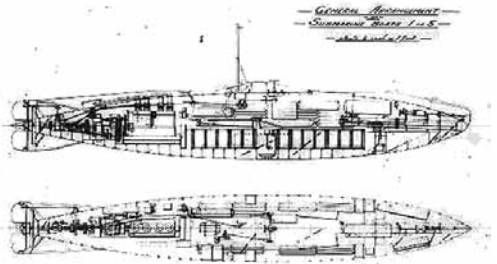
suppressed Fulton took the design to the French (The Nautilus).

When the idea *was* finally taken up, it was the designs of John Holland which came to the fore in the UK. His history of selling the idea was chequered, being taken up by America and Irish patriots. When Holland with his submarines and Rice (battery technology) produced USS Holland for the US Navy, the Admiralty could no longer hide from the fact that these machines were now successful weapons of war.

The Holland designs were used by the British Navy until 1913 when Vickers Armstrong of Barrow-in-Furness took over general production, and that area has been associated with submarine “boat” building ever since.

From the pre WWI years to the Cold War, a succession of submarine developments was represented by the different “classes” of boats, starting with the A class. Space precludes a full itemisation of these classes, but generally they changed with major advances in technology.

The sinking of A1 class boats led to the increased height of conning towers; B class had hydroplanes to improve steering and manoeuvrability. During WWI, C class boats were taken overland to stop the flow of Iron



[Picture of Holland 1 Section]

Ore from Sweden to Germany. The D class saw double hulls and external ballast tanks giving more crew and armament room, and improvements such as deck guns and wireless telegraphy. The D class also had diesel engines and toilets!

The D and E class were the mainstay of the fleet until WWII and at 800 tons could dive to 100feet. G class first used the Navy's standard 21" torpedo. WWII brought mixed fortunes in development with the J and K classes not living up to design promise, despite the K's steam turbine engines. In WWII the S, T and U classes see an increase in weight, range and speed and by 1943 the new A class was put into service, of which HMS *Alliance* is an example, and stayed there until the 1970s.

By then the world had changed, the emphasis was on covert operations, nuclear power had arrived and the ICBM. Submarine science was come of age.

Other snippets included the flying of the Jolly Roger (skull and crossed bones) by returning submarines who had scored “kills”. The



[Picture of A class HMS Alliance]

last time this was done by the British Navy was by HMS Conqueror after sinking the Belgrano during the Falklands War.

Churchill was Sea Lord when submarines were officially classed as HMS rather than boats.

In 1904 HMS Dolphin in Gosport becomes HQ of the submarine fleet and, because submarines could easily get into Haslar Creek, stays that way until Faslane takes over.

Gosport is now the home of the Royal Navy's Submarine Museum, well worth a visit, where more of this fascinating story is told in words and the actual ships such as HMS *Alliance*, equipment and relics. Find out more at <http://www.submarine-museum.co.uk>

Chris Sellen

“Not Just Digging Trenches”

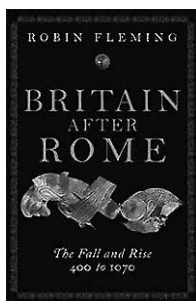
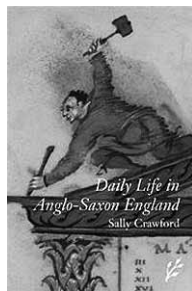
War Jaw, a group interested in war and conflict archaeology, is organising a conference on the archaeology of WW1 on Saturday September 10th at Birkbeck College, London. The speakers will be both academics and field archaeologists as well as commentators on the period. Additionally, Matt Leonard will give a short presentation “Muddy Hell: an exploration of mud as material culture of the Great War”. This will be looking at the impact that mud, such a huge part of the First World War, had on the way the war was fought and experienced. Their website gives further information and booking details: www.warjaw.co.uk/conferences

Book Review

Robin Fleming, *Britain after Rome: The Fall and Rise, 400 to 1070*, Allen Lane, 2010, ISBN 978-0-713-99064-5 hardback £25, 458 pages.

Sally Crawford, *Daily Life in Anglo-Saxon England*, Greenwood World Publishing, 2009, ISBN 978-1-84645-013-6 hardback £34.95, 245 pages.

Both authors set out to investigate wide aspects of life in Anglo-Saxon times – Fleming for the whole of Britain and Crawford confining herself to England. Both use both archaeological and documentary evidence and both insist that they want to avoid a historic approach dwelling on royalty and politics but focus on the whole population. Beyond this common aim, their methods diverge. After an opening ‘scene setting’ chapter, Crawford’s book takes themes for each chapter: Housing and households; Trade and travel and so on. She then sub-divides each chapter so, for example, the chapter on clothing and appearance has ten sub chapter headings. Most sub-chapters attempt to cover the whole span of early, mid and late Saxon periods, but the lack of written source material from the fifth to seventh centuries means that this period is often shortchanged. The resulting short essays mean that some things are not discussed in the depth I would have liked. For example, Emma is simply dismissed as an Anglo-Saxon queen....Yes but! Despite this gripe, the material is well referenced with sufficient examples.



Fleming’s chapters begin at the end of the Roman occupation and end at the Norman conquest. Some are themed (example: belief and ritual 4th to 7th century). This chronological approach gives her narrative much more flow. Her intention to “take up the space for thousands of nameless individuals who lived and died alongside the likes of King Offa...” is taken to extremes. Fleming bends over backwards not to mention any king by name, for example, discussing the implication of Ine’s Laws without mentioning Ine. At some points I found Fleming’s absolute refusal to acknowledge key kings or ‘high ups’ infuriating – this is a genuine socialist approach to history. But over and again Fleming redeems herself with a real depth of both archaeological and documentary source material. But the book isn’t traditionally referenced. Instead it contains 62 pages of suggested further reading

and notes on source material.

Both books are well produced and indexed. Crawford's has 20 black and white photos and some line drawings but they do not add much to the piece. I did actually like Crawford. It is crisp and to the point and, despite its sub-chapter approach, is easy to read. At times I got cross with Fleming's no-naming-kings rule but this was more than compensated for by the number of times I said "oh gosh, yes that makes sense now". Fleming's book brings real insight and is worth buying for its analysis of economic growth and monetary policy alone. The quirkiness, I eventually decided, is an added bonus.

Techer Jones



Volunteers required!

The Basingstoke Archaeological and Historical Society will be involved in a dig in their area and are looking for volunteers. As with WARG's own dig, there will be a need for helpers of all kinds and there'll be experts on site to train those with no experience. Their dig will be running for 4 weeks from November 1st so if this interests you, email debbie@archaeobriton.co.uk for all information.



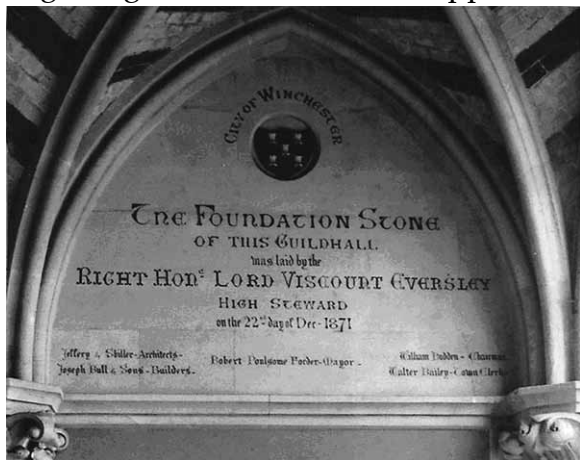
Does anyone have storage space?

For some time we have been storing all our excavation equipment in Techer's shed. Techer's shed is in desperate need of rebuilding – the roof is leaking - and he wonders if anyone else has the storage space necessary for our kit. With the exception of a dozen wheelbarrows (which can live outside), the boxes of trowels, tapes, the shovels, and all the other kit takes up an area about 4'x8' on three shelves. That is really cramming it in, and frankly a bigger area would make life easier when we need mid-year access to something. The shed or outhouse needs to be waterproof and dry but not pretty! Ideally we could de-camp everything at the end of this summer's dig, but that isn't critical. Can anyone out there help? Please email chair@warg.org.uk if you have space or have an idea where we might find some space.

A true Victorian Company:

A local builder of national and international repute in Victorian Britain

Whilst looking into my father's family tree we came upon an indenture for my great great grandfather to be an apprentice grocer in Lymington. One of his sponsors (and his uncle) was Joseph Bull, a builder of Southampton. We thought little of it until my wife and youngest daughter saw on the foundation stone at the foot of the steps at the front of the Winchester Guildhall that the builder, was the firm of Joseph Bull & Sons, the name of my ancestor. Greatly intrigued we decided to dig deeper.



Foundation stone, Winchester Guildhall

Joseph Bull with his sons, Henry William, Edward Charles and Frederick were important and influential builders in their time; true Victorian entrepreneurs. Some of Joseph's other sons became solicitors and clergymen.

Joseph started the business with a partner, a Mr Cossens, in St Marys Southampton in about 1832 but soon branched out on his own, probably with small local contracts, gradually building a name and reputation.

Church & royal connections

The Bulls were not only concerned with their business, they were also involved in the local church; Henry Bull was a churchwarden at St Marys Church Southampton. They appear to have built or refurbished many local churches and chapels including St James Church in Southampton, later destroyed during the Blitz. Probably because of their beliefs, they seem to have treated their workers relatively well and in 1860 they granted their workers a half day holiday every Saturday, allowing them to finish at 4.00pm.

Joseph Bull & Sons appear to have specialised in grand buildings, quite often of the "Gothic" style. Not just Winchester Guildhall, but some of the other major projects they undertook, like the Royal Courts

of Justice in the Strand, London which they completed in 1881. At its opening in 1882 the Bulls were in the grand procession and presented to Queen Victoria. A bust of Henry Bull is still high on a corner of the quadrangle of the Royal Courts.

Building Hampshire's industrial and civic heart

Local grand buildings include St James Church and the Southampton Savings Bank building in Havelock Road, also destroyed during the Blitz. Other projects were the building of the new County Court Building in Castle Lane and the Corn Exchange building on Town Quay in Southampton both being completed in 1852. In 1853 they won the contract for the New Borough Gaol in Ascupart Street which was to "have provision for fresh air" and built to the same "modern" design as Pentonville.

There were more mundane contracts, such as sewage outlets at Belvidere wharf (including later repairs when the outlet was struck by a ship), warehouses, like "Geddes" warehouse on Town Quay, originally a luggage warehouse for the liners, and buildings for the local gas and railway companies, including the stations at Swaythling, Lymington Town, Hook and Netley. The company had a contract to maintain and enhance the Southampton to Basingstoke line and all line-side buildings for the London & South Western Railway during the 1880's.

Expansion into Winchester and surrounding areas

In Winchester, apart from the Guildhall, completed in 1873, the company had contracts at the new Peninsular Barracks for the hospital block (now called Mons Block and recently converted into flats), married quarters and the Garrison Church, now the cinema in Southgate Street.



Winchester Guildhall

The company also built significant private dwellings including "Netley Firs" at Hedge End (demolished for the M27) for the Earl of Pembroke, "The Winslows" at West End for Mr George Gater, Langley House, Eling for Mr R F Wingrove, Headbourne Worthy House, and the new Vicarage including

stables and outbuildings in Froxfield. Many other houses would have been built by Joseph and his sons but the records do not survive.

National & international reputations, local resources

The main works in Southampton were around the James Street area of St Marys. But to supply all the projects, Joseph Bull & Sons had interests in many associated businesses, sometimes being the outright owners. These included brick and tile works at Chilworth and Chandlers Ford, the Southampton Steam Joinery Company at Belvidere Works in Northam and a timber importers at Belvidere Wharf (importing timber from Canada, Russia and Scandinavia).

For the Royal Courts of Justice, 35 million bricks measuring 10 inches by 5 inches by 2 inches, were supplied from the Chandlers Ford brick works. For the House of Assembly (Houses of Parliament) in Cape Town, the one known foreign excursion and completed in 1886, the architect insisted on British bricks as he thought colonial-sourced bricks of inferior quality and unsuitable colour.

For the London contracts there was an office at 1 Clements Inn, The Strand. This probably undertook many more London projects, including an extra storey on the Patent Office, but these records appear no longer to exist. They also had a contract with a school board in Surrey to build and maintain schools in the area.

Mounting troubles and final demise

Delays in payment by the government for the Royal Courts of Justice seem to have overstretched them financially. In an act of supreme irony, their bankruptcy hearing was one of the first to be heard in the court they had built.

The reformed and smaller company, the "Southampton Steam Joinery Company", survived until 1902, when a combination of a disastrous fire at their main works, including the loss of their 150 workers' own tools (who all consequently lost their jobs) and industrial unrest brought the final curtain down on the firm.

Many of their buildings still stand, though their uses may have changed over the years. Many have become flats or have changed from industrial to commercial use, but the fabric in most cases seems to have remained largely unaltered. These are truly a fitting testament to Victorian quality and local materials.

Stephen Old

The Azores

Never heard of them, didn't even know where they were, but our latest holiday proved to be most interesting.

Discovery

The Azores, an archipelago in the Northern Atlantic ocean, were discovered by Portuguese explorers including Goncalo Velho Cabral from 1427 to 1452 and are now part of Portugal. Plenty of Baroque and neo-Gothic churches can be seen whilst colonial architecture from the 16th century dominates the towns with Angra do Heroismo on the island of Terceira being a UNESCO World Heritage City. From emerald green through to aquamarine the overriding impression of the nine islands is lush green pasture, vegetation and beautiful flowering plants.

Volcanoes and Earthquakes

Created by mid-Atlantic volcanic activity the islands are relatively "new" geologically speaking. On the island of Terceira entering the empty magma chamber of an extinct volcano, which erupted 3,000 years ago, was an amazing experience. We were dwarfed by the vast cathedral-like cavern, the lake at the base can attain a depth of 15 metres whilst slow growing obsidian and silica stalactites abounded. From the outside the volcano is considered to be relatively small, so goodness knows what a large one would be like inside!

Sao Miguel was originally two islands, but 50,000 years ago a land bridge rose from the ocean and connected them, creating the largest island of the group. We experienced an earth tremor on Faial one morning but the locals took no notice, so neither did we. On Pico, the Arcos lava field from the 1718 eruption clearly demonstrates the different types of lava; skin, where the surface cooled faster than the magma underneath; bubble lava, where gas "popped" and toe lava, created by an extending flow.

Furnas, Caldeiras and Caldeira Velha, all on Sao Miguel, are testimony to the earth's continuing geo-thermal activity just below the surface. Boiling hot springs, fumaroles, bubbling hot mud cauldrons,



yellow sulphur stains on the ground and the smell of hydrogen sulphide in the nostrils reminded me of the witches of Macbeth.

Early settlers

The early settlers found uninhabited islands and set about clearing land to grow wheat, however the strong Atlantic winds destroyed the crops and a dairy industry was created instead. The cows outnumber the population by at least three to one! These winds led to the Holy Ghost Festival (which has never been officially approved by the Catholic Church) as the wind, or Holy Spirit, had to be appeased and worshipped. Veni Sancte Spiritus appears over the door of small chapels, which are found in every village and town. On Whit Sunday the “imperador” (emperor), chosen for that year, wearing a silver crown topped with a dove and carrying a sceptre leads a procession accompanied by the village band, later food and alms are given to the poor, followed by much feasting, drinking and jollity.

Crops

As well as the dairy industry, which produces delicious cheeses, on Sao Miguel pineapples have been grown under glass since 1860. Each plant produces only one pineapple which takes two years to grow. Tea plantations on the island, begun in 1820, produce orange pekoe, green and black teas. Previously the tea picking was done by hand, by women and children but now the process is mechanised.

In 2004 Unesco declared the vineyards of Pico to be a World Heritage Cultural Landscape. Small square areas have black basaltic rock walls to protect the vines from the winds. The rocks absorb the heat of the hot sun during a long growing day, creating a micro-climate which produces a high level of sugars in the grapes, resulting in an alcoholic content of 16-18%.



Forts

Located on the route from Spanish America to the Iberian peninsula the Azore islands were of importance during the late 16th century. Forts were built along the coasts, guarding safe harbours, so that Spanish and Portuguese ships could shelter from English “pirates”

such as Drake, Cumberland (1589) or Essex (1597) who wished to steal the gold stolen from the Aztecs in the first place!!

Whaling

The Azores are on the migratory route of the sperm whale (baleias), and from the late 18th century whaling became an important part of Azorean economy. Look-out stations were built on high ground, once a whale had been sighted signal flags sent the whalers to their boats, guided them to the whale and after a kill told the townsfolk to prepare the factory for the dismemberment and processing, which used every single part of the whale. Whaling ended in the 1980s and the look-out posts now use technology to guide tourist boats on whale-watching expeditions, the actual whaling boats are used for sport whilst the factories have become museums.



World War Two

Owned by neutral Portugal, the Azores were of strategic importance during World War Two. German U-boats sheltered in the bays before attacking Atlantic convoys. After pressure on the governor of the islands the Allies set up refuelling stations for aircraft crossing the Atlantic, a mid-Atlantic airbase for U-boat hunting aircraft and a direction-finding-plotting station used triangulation with the UK and USA to get an accurate fix on the location of U-boats. There is no doubt that having the Azores “on our side” helped to fight the Battle of the Atlantic.

Conclusion

The landings on some of the rather short runways, which are parallel to the ocean, can be interesting but once you have arrived there is so much to see, friendly people and good food. Spring is the best time to go but if you want a “beach and pool-side holiday” then they are not the place to visit, since you can experience all four seasons in one day!!

Valerie Pegg

A visit to Vindolanda

This May, while spending a week in Northumberland, Steve and I decided to visit the Roman fort of Vindolanda. What an amazing place.

Around AD85, after Agricola defeated the northern tribes at the battle of Mons Graupias, thought to be near Inverness, the first fort at Vindolanda was built to guard Stanegate, the east to west supply road. In the AD120s, when Hadrian's Wall was built, it became a Wall fort between Housesteads and Great Chesters and remained a military establishment until the end of the Roman rule in Britain, around AD400. In this time the Roman Army constructed at least ten forts on the site: archaeologists wanting to explore the earlier settlement have to excavate down to four metres in places! The site consists of the village outside the fort walls, and the fort itself. Excavation was started in the 1930s by archaeologist Eric Birley and is carried out for six months of the year. The excavations have been continued by Birley's sons, Robin and Anthony, and his grandson, Andrew. We were told that there is another 150 years of excavations to carry out!!

The Roman army custom of laying down a clean cover of clay and turf over demolished structures before rebuilding has created anaerobic (lack of oxygen) conditions in many areas. The lack of oxygen has led to the survival of almost everything that was lost or discarded at the time. The Museum, in the valley just to the east of the site of the stone fort, holds a vast range of leather goods, textiles, wooden, bronze and iron objects. One of the most interesting finds is a lady's hair net!

Bracken and heather were used to carpet the dwellings, with heather also being used for fuel in the cooking ovens. From bone and soil samples it is known what animals were kept and their ages when they were slaughtered. Civilians living in the village would have paid rent and provided the military with most of their needs. Raised cooking benches and traces of ovens have been found in these homes. Shops and workshops have also been uncovered. All of these buildings appear to have been of high quality, most had stone foundations with timber and wattle walls. Interestingly the civilian houses appear not to have any space for parking carts or raising allotments. Allotments were a necessary requirement for all villages and it is thought that in Vindolanda they were on the outskirts of the settlement.

Other buildings that have been excavated are the headquarters building, considered to be the best example of an auxiliary principia

in Britain, two bath houses from different dates, granaries, the commanding officer's residence and the layout of one of the village streets. The fort wall has been unearthed and where necessary rebuilt so that the complete wall can now be seen. In 2010, the remains of an 8-10 year old girl were recovered in a pit in what was the barrack room. Her hands had been tied and it is thought she may have been murdered.

However leaving the best to the last, it is here at Vindolanda that the famous writing tablets were found. The ink and waxed writing tablets are considered to be an 'outstanding national treasure'. To date over 1,400 pieces of texts have been discovered, ranging from tiny scraps with a few letters or words to some that are complete with more than sixty lines of writing. The most famous is the invitation to a birthday party on September 11th. It was sent by Claudia Severa to her friend Sulpicia Lepidina (the wife of a Vindolanda prefect) around AD103, and is proof that wives accompanied the soldiers to far flung postings in the years around AD100. There are business letters, letters between ordinary soldiers, from wives to their husbands and between slaves. In all, these tablets give a fascinating insight to the lives and times of the people who lived at Vindolanda.

If you are ever in the area west of Newcastle and east of Carlisle I can thoroughly recommend a visit to this very interesting site. The day we visited there were 25 people excavating, they were most helpful and very willing to answer questions from onlookers. But do allow at least four hours and preferably the whole day to thoroughly explore all that there is on offer. Further Reading: Robin Birley, **Vindolanda, The Home of Britain's Finest Treasures**, 2009. ISBN 978-1848682108, £16.99

Sonia Simpson



Roman abbreviations

Much of what we know about the ancient Romans comes from inscriptions and graffiti on tombs and other monuments and artefacts like ceramics and coins. Just like us, the Romans were not averse to saving time, effort and money by abbreviating their inscriptions or using acronyms, like “SPQR”.

This handy habit persisted in Western Europe long after the collapse of the Roman Empire. The Church and learned professions used Latin as their lingua franca and many Latin words and abbreviations in use today were actually coined in the Middle Ages and the Renaissance. “AD”, for example, was a term adopted long after the birth of Christ and starting a date with “M” is much later.

The commonest abbreviations shorten text by truncating verbs and nouns. Missing off their endings did not cause a problem for readers who could conjugate verbs and decline nouns in their sleep. So the Romans invented their version of the “txt msg” 2,000 years before the mobile phone was invented.

Numbers were also abbreviated, like M for mille and C for centum. Nowadays we tend to think of C as the abbreviation for century, meaning 100 years, but centuria also means a military unit under the command of a centurion. The Roman army referred to them frequently in muster returns. It could not abbreviate centuria as C, so instead it abbreviated centuria as C , ie (sic!) a back-to-front C. A muster return which kept using this abbreviation of C for centuria was found on a wooden writing tablet excavated at Vindolanda. So the Roman army also had its own, specialised military shorthand.

Another example from *Vindolanda* was excavated in 2010 (see photograph below). It is (almost) half of a (top) quernstone. It has a hole in the centre where grain was dropped in, below that is a notch where a wooden peg was wedged to rotate the top stone and the back is deeply incised with parallel lines, to grind



the corn and drive it outwards to the rim, where flour came out. When found it was upside down. There was an “OMG!” moment when it was lifted and turned to show the lettering.

The inscription which was revealed reads “O, FRICAN”, an abbreviation for Centuaria Africani, which means the Century of Africanus, the name of the officer-in-charge. Africanus was a popular Roman name, especially in the army. The most successful Roman general before Julius Caesar was Scipio, who put an end to the Punic Wars by destroying Carthage. The Senate gave him the title “Africanus”. He is also the only ancient Roman mentioned in the modern Italian national anthem.

The next day the site supervisor told the couple who found this to find the other part - and they did ! It made a perfect match and had no inscription on it. It's just what archaeologists crave because (a) it's a complete artefact (b) it has a complete inscription (c) it names a previously unknown centurion. The finders were rewarded with a bottle of champagne (WARG Committee please note!).

Chris Sharratt

Cambodia isn't all Angkor Watt

In January, Janet and I went to Cambodia to visit our daughter who is undertaking a two-year VSO medical post in a very rural area. Of course we had the obligatory five days at Siem Reap and the temples were wonderful. But one of the archaeological highlights of the trip was discovering Cambodian Pre History. An exhibition at the National Museum in Phnom Penh tells all. Until very recently it was assumed that Cambodia had no pre-history and that the wealth that created Angkor Watt derived from Cambodia's position on the trade route from India to China, first exploited around 500BC. Now excavations started in 2002 tell a different story.

The exhibition focuses on two sites – Village 10.8 (what a romantic name) in Kampong Chan Province and Prohear about 65km east of Phnom Penh. The 10.8 burials are dated 400-100BC. In the museum exhibition I was looking at Iron Age artefacts that could have come from Danebury. It was remarkable how similar both the pottery and the tools and implements were to what we see in Europe.

A bronze disc in one burial is evidence of long-distance trade,

probably with SW China, as the components of bronze are simply not available in Cambodia. 10.8 yielded no gold or silver, but Prohear certainly compensates. Burials at Prohear, dating from 1000BC to about 1000AD, show a different culture only a couple of hundred kilometres distant. They yield lots of gold and silver. But remarkably they also yielded dozens of bronze drums. The drums are about 60cm to 100cm across and 30cm deep and are highly decorated. The interpretation is of new peoples moving into the Cambodia/Vietnam peninsula from China and bringing their wealth with them. Put Village 10.8 or Prohear into Google or National Museum Phnom Penh and you will find more. Archaeology is obviously a luxury in Cambodia which has a desperate economy, but it was wonderful to see that the German Embassy had funded several years of excavations and research at these sites, enabling the Cambodians to discover a part of their culture and heritage which was unknown 10 years ago. Location for the WARG Summer Dig 2012?

Techer Jones



WARG Committee Members

Dick Selwood (Chairman) 34 North View, Winchester, SO22 5EH
Tel: 01962 853781 Email: chair@warg.org.uk

Techer Jones (Hon Treasurer) Longwood View, Lane End, Owslebury, SO21 1JZ
Tel: 01962 777355 Email: treasurer@warg.org.uk

Julia Sandison (Secretary) 22 Clifton Road, Winchester, SO22 5BP
Tel: 01962 867490 Email: membership@warg.org.uk

Michael Fielding: Email: mfldn-01@chezfldn.plus.com

Chris James: Email: cjames07@virginmedia.com

David Lloyd: Email: david.lloyd27@yahoo.co.uk

Chris Sellen: Email: webmaster@warg.org.uk

Steve Taylor: Email: sctaylor@win.eclipse.co.uk

Tracy Matthews (for WCC): Email: tmatthews@winchester.gov.uk

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