

# East Dorset Antiquarian Society

[www.dorset-archaeology.org.uk](http://www.dorset-archaeology.org.uk)

[mail@dorset-archaeology.org.uk](mailto:mail@dorset-archaeology.org.uk)

Established 1983

Edited by: Andrew Morgan, email: [andrewmorgz@aol.com](mailto:andrewmorgz@aol.com), tel: 01202 731162

## NEWSLETTER – FEBRUARY 2015

### EDAS COMMITTEE VACANCIES

This year, two stalwarts of our committee, Brian Maynard and Steve Smith, have decided to stand down and will not stand for re-election. We offer our warmest thanks for everything they have done in support of EDAS over many years.

This is an opportunity to make a contribution to our society, please consider applying for one of these positions. No special skills are needed, just enthusiasm and a willingness to participate and get involved.

The committee usually meets once a quarter at the Priest House Museum, Wimborne and the meeting normally takes about two hours.

There is an application form attached to this newsletter.

### EDAS Lecture: Geomatics in Archaeology by Damian Campbell-Bell

*Please note, this comprehensive resume of the talk was kindly provided by Damian, who stepped in at the last moment when Steve Smith, our Programme Secretary, found out that the original speaker no longer worked for Wessex Archaeology.*

Geomatics is the gathering of spatial information; it is the measuring of things to produce plans, models, databases etc. It often involves collecting not just measurements but also information about what you are measuring, for example distinguishing between a trench edge and a pit within it.

#### Laser scanning

Laser scanning allows you to collect data very rapidly. Laser scanners fire beams of light whilst spinning round collecting measurements in almost a complete sphere. Laser scanners work by measuring the time it takes for a beam of light to travel to an object and bounce back. Using the constant speed of light the scanner is able to work out the distance that beam travelled, and they do this around a million times a second.

From these measurements the laser scanner produces a point cloud, modelling the surfaces of everything within the instruments range with a point up to every mm. By piecing multiple scans together you can create a complete 3D model. Laser scanners can also be used to produce traditional 2D outputs such as the elevation drawings and plans. This survey method is useful for fast accurate recording of buildings, ruins, carvings and artefacts.

#### UAVs

Unmanned Aerial Vehicles are another area of survey which is increasingly being made use of in archaeology. These can be used for a range of different tasks from traditional aerial photography, to landscape modelling for environmental impact assessments, to recording of buildings. All of these involve the same basic technique however. The UAV is fitted with a GPS and a light but high quality camera and takes many pictures on its flight. Using the GPS data and feature recognition software the photos can be pieced together to create one large image or a 3D model using photogrammetry.

Due to the expense of the equipment and the requirement to have licences to fly UAVs Wessex Archaeology have a partnership with Callen Lenz, who do all of the data collection for our UAV surveys. Wessex then carries out the processing of the data.

Digital terrain models (DTMs) can be subjected to rugosity analysis to identify new features. Rugosity measures the ratio of surface area to planar area, which creates an estimate of the “roughness” of the terrain.

One landscape survey near Salisbury identified over 100 new features of archaeological and historic interest, including field systems, new extents of a medieval village, a bank and ditch system, oval ditched features, undated ditches and features relating to past military activity.

UAV surveys do have a number of limitations though. Being based on photography vegetation and over forms cover is a serious issue. Also any features may be obscured by modern tracks or farm equipment. Another limitation is the areas in which it is possible to fly UAVs. Flight restrictions near airports and residential areas for example mean that it is not possible to survey with this technique.

### **LiDAR**

LiDAR overcomes some of these disadvantages. Being similar to laser scanning it sends out millions of beams of light to measure distances from the scanner. Whilst many of these will hit vegetation cover some of them will penetrate, allowing you to survey the terrain below. This has even been used in the jungles of Cambodia to uncover remains of the urban centres around Angkor Wat.

LiDAR data can be acquired in 2m 1m 50 cm 25cm data sets. Typical accuracies for height in these cells are 5 - 15cm. GPS and internal navigation systems are used to know the position and angle of the scanner.

### **Topographic survey**

Topographic survey involves the recording of landscapes through GPS or total stations. This is not only a metric record but an interpretive one too. Often a survey will start with transects being walked across the site to get a background picture of levels which can be used to create a contour plan. Tops, bottoms and breaks of slope, and any other pertinent features can then be picked out to aid in interpretation of the site.

The way in which landscape features interact can be used to build a sequence of relative phasing and combined with an interpretation of function based on their form can reveal a lot about a landscape’s past. This is often further improved with documentary or excavation evidence for the area.

Often topographic surveys are carried out in order to preserve them by record before they are destroyed by development.

### **Archaeological site survey**

Site surveys are used for many different reasons. At the start of a project they are used to quantify what is present on a site so that a mitigation strategy can be developed and implemented. As a project goes on they serve as a record for clients, county archaeologists and project managers as to what has and hasn’t been done. They are not only metric, but interpretive recording where and what something is, as well as things like context numbers and section lines.

Ultimately the site survey will be used to produce a plan of the site for the report and will be used to aid in interpretation and phasing of the site. It is therefore important that things are recorded in the proper manner and all of the information contained within them is correct.

### **Data integration**

Archaeologists collect a lot of data on any individual site. As well as the site survey there are context sheets, drawings, photographs, finds and environmental records etc. These means that to properly interpret and understand a site a lot of cross referencing of information stored in different places is needed. On top of this there is background research, local sites, previous phases of work which all may be relevant.

If all of this data could be integrated into one location understanding these sites would be made much easier and less time consuming, especially if that location is a spatial representation. By having data imbedded in a model of a site a great deal of time and money can be saved throughout the life time of a project. Traditionally this has been done to some degree with GIS packages. In response to government rulings the construction trade which archaeology necessarily has close ties to is moving towards Buildings Information Modelling (BIM) as a standard way of creating and storing data. The aim is to make the sharing of data as easy as possible, again allowing time and cost efficiencies to be made.

***Damian Campbell-Bell, Surveyor Officer, Wessex Archaeology***

### ***DORSET PLANNING and HERITAGE ADVISORY GROUP- Pilot Scheme***

As mentioned in the last newsletter members of EDAS will participate in a pilot scheme to assess whether an amateur society can perform a useful role in processing planning applications. The intention is to use local knowledge to better ensure the archaeology is best served. The pilot will cover the East Dorset District, excluding Poole, Bournemouth and Christchurch. This is NOT an exercise to discourage development, it is meant to complement the role of the Dorset County Council archaeology services, and there is NO intention to undermine or replace this critical service.

These are early days, but we are arranging preliminary meetings and we intend to start early April 2015.

We need the support of keen members who are interested in this challenge, if you want further information please contact Andrew Morgan.

Email: [andrewmorgz@aol.com](mailto:andrewmorgz@aol.com)

Tel: 01202 731162

**PLEASE REMEMBER THE MARCH LECTURE WILL TAKE PLACE AT BOURNEMOUTH UNIVERSITY**

**SEE POSTER OVERLEAF**

**This is a large venue that can take up to 300 people. We hope for a large turnout so please publicise with friends and other local groups. We will send invitations to local schools and local societies.**

# LIFE AND DEATH IN POMPEII AND HERCULANEUM

talk by

PAUL ROBERTS, SENIOR CURATOR, BRITISH MUSEUM

11<sup>th</sup> MARCH 2015

7.30 pm

The MARCONI THEATRE, TALBOT CAMPUS, BOURNEMOUTH UNIVERSITY



*AD 79 in just 24 hours, two cities in the Bay of Naples were buried by a catastrophic eruption of Mount Vesuvius. Preserved under ash, the cities lay buried for just over 1,600 years, their rediscovery providing an unparalleled glimpse into the daily life of the Roman Empire.*

EDAS, in association with the Bournemouth University Archaeology Society, are pleased to invite you to this fascinating talk by Paul Roberts who was responsible for curating the very successful Life and Death in Pompeii and Herculaneum exhibition presented by the British Museum, 28 March – 29 September 2013.

***Non-members will be invited to make a donation of £2***

For further details and directions please refer to the EDAS web-site: [www.dorset-archaeology.org.uk](http://www.dorset-archaeology.org.uk).

Any queries please email: [mail@dorset-archaeology.org.uk](mailto:mail@dorset-archaeology.org.uk)



**East Dorset Antiquarian Society**

## **GREAT DORSET ARCHAEOLOGY & MYSTERIES QUIZ**

EDAS and the Priest House Museum are jointly organising a fun quiz night, to be held on

**Friday 13<sup>th</sup> February 2015 starting at 7.30pm at the Priest House Museum.**

Test your knowledge about Dorset, from the depths of prehistory, through the incursions of the Italians, the Germans, the Scandinavians and the French, right through to the modern era. Even if you can't answer some of the questions you will go away having learned some interesting facts!

There will be eight rounds of questions, with a break for light refreshments.

This is a team quiz with up to 6 people per team and the charge is £5 per person. Just let us know if you want to attend – we can help arrange you into teams if necessary. The price includes the refreshments.

Tickets will be on sale from the Wimborne Tourist Information Office, next to the Priest House Museum, or can be arranged through Bryan Popple and Andrew Morgan.

Please book as soon as possible to help us finalise the arrangements.

***Proceeds will be shared between the PHM and EDAS***

## **COUNCIL for INDEPENDENT ARCHAEOLOGY**

### **2015 Conference**

As many of you will know the CIA is dedicated to promoting the cause of archaeology and promoting the role of amateur archaeologists. A notable success being the clarification of the Valetta Convention which threatened amateur led activities.

EDAS is delighted to have been invited to host the 2015 conference and we will be finalising the arrangement over the next couple of months. It is a one day conference to be held on a Saturday next September/October.

The conference will be open to all interested archaeologists; you do not need to be a member of the CIA to attend.

Further details to follow.



# EDAS Field Trip 2015



**Sunday June 14<sup>th</sup> to Friday June 19<sup>th</sup>**

Anyone who has organised a field trip will know the difficulties of sorting out an itinerary that's going to appeal to the wide diversity of interests within the society. This year there will be the usual eclectic mix of activities plus lots of socialising. The itinerary is very full, and although nearly complete, may still need some final tweaking. This means the customary day of rest may have to be cancelled this year!

We shall hopefully have guided tours of Grimes Graves the world renowned Neolithic flint mines; and the Bronze Age ritual site of Flag Fen that now houses the exciting find of the Must Farm Bronze Age boats.

We will visit Thetford, sacked by Sweyn Forkbeard and the Vikings, where we walk around the Norman castles, priory, churches and Saxon defences. For steam enthusiasts there will be the opportunity to visit the Burrell museum, or there is the Ancient House museum.

The monastery of St Edmundsbury was also sacked several times by the Vikings. It is ironic that Cnut the only Viking King of England granted it abbey status. In the year that we will be celebrating the 800<sup>th</sup> anniversary of the signing of Magna Carta it is appropriate that the field trip will be taking us to the place where in 1214 the clandestine and key historical meeting of the barons took place that eventually led to King John being forced to sign the original Magna Carta document at Runnymede.

We shall visit an Iceni hillfort, the suspected scene of a Roman massacre, we use the term hillfort advisedly – this is Fenland!

We shall spend a full day in Cambridge including a privileged guided visit to Corpus Christi library, where we will be able to see its many treasures including the Gospels of St. Augustine dating from the sixth century, and hear of the connection between Elizabeth 1<sup>st</sup>, the Archbishop of Canterbury and the consolidation of the Church of England. There will be free time to go punting on the Cam – magical if it's not raining!

We shall also spend time in the medieval towns of Long Melford and Lavenham, both rich in medieval buildings, and both founded on the wealth generated by the wool trade.

We will learn about the age of steam and the drainage of the Fens during a visit to the Prickwillow museum.

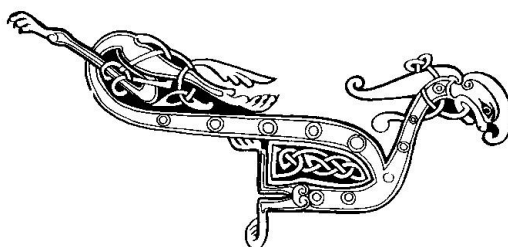
There will be the customary guest lecture and evening meal, and on the final night the Last Supper.

This is a very busy schedule, some visits etc have to be confirmed when final numbers are known, and there may yet be changes to the plan. I'm hoping that we may be able to visit an archaeological excavation during the trip, but we won't know that until later in the year.

The trip will be roughly based around Bury St. Edmunds, this is almost certainly going to be the place where the guest lecture/meal will take place. The group numbers will have to be strictly limited this year because of the visit to the Corpus Christi library.

Please contact me if you are interested in going on the trip:

Keith Allsopp: [keith.allsopp@btinternet.com](mailto:keith.allsopp@btinternet.com); or 01258 840 893





*Last year EDAS Member Neil Meldrum gave a talk about Meso-American civilisations and mentioned that he would return to Belize to work on an excavation in the summer. He kindly accepted our request to write about his experience and he has provided this very interesting article not only about the archaeology but also about his experiences as he travelled round this fascinating country.*

## **BELIZE July 2014, by Neil Meldrum – Part 1**

The country of Belize (formerly British Honduras) is a bit of an enigma. The population is an eclectic mix of African, Creole (mixed European and African descent), Mestizo (mixed European and Mayan Indian descent), pure Mayan Indian, ethnic Hispanics and increasingly Americans and Europeans in the coastal regions. Belize is quite different from its predominantly Hispanic neighbours in Mexico and Guatemala. Amongst themselves people speak Creole, a very corrupted English (quite incomprehensible to the average English person), various Mayan dialects or Spanish. Fortunately, as a former British colony, most people are able to communicate in English, still the official language, but most people are also multi-linguists, which puts me, as a mono-linguist Englishman, to shame.

I spent the month of July last year in Belize, interrupted by a trip into Mexico and a brief visit to Guatemala. It was my fourth excursion to, and my longest stay in, Belize. My reason for going? The Ancient Maya, a civilisation which dominated most of modern day Guatemala, Belize and parts of south west Mexico and the Yucatan Peninsula for over fifteen hundred years. This region together with Central Mexico, an area known as Meso-America, was the home to many diverse civilisations prior to the arrival of the Spanish. The Aztecs of Central Mexico were just the latest. They only became predominant from about 1400AD, and were abruptly curtailed in their prime by the Spaniards who arrived in 1519, but they were the inheritors of a vast wealth of culture going right back into time.



The Olmecs are given the honour of being the first civilisation in Meso-America. They originated in the hot swamplands of coastal Veracruz from about 1200 BC. The Maya were hard on their heels. By 400 BC the Maya were building large cities in the jungles of the Peten area in northern Guatemala and also in the southern Guatemalan highlands. By this time all the characteristics of their later brilliance was already in evidence. This Mayan pre-Classic culture flourished to about 100AD. There followed a hiatus possibly caused by a combination of climate change (it got markedly drier) and volcanic eruptions (which of course may in itself have had an impact on climate). The civilisation recovered and the Ancient Maya entered their most brilliant phase, the Classic Period from about 300 AD to 800 AD.

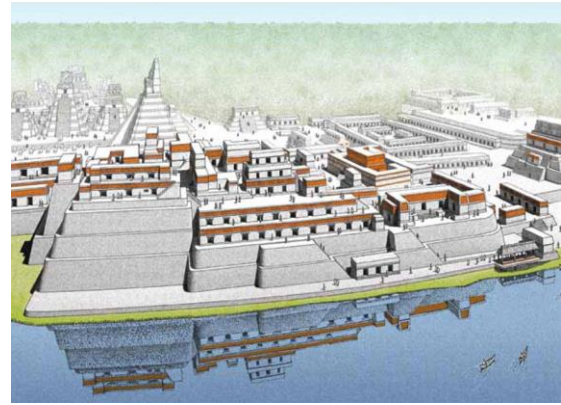


*Impression of a city of El Mirador at about 400 -200 BC.*

During this Classic Period huge cities were constructed all over the Peten region of Guatemala, in south west Mexico, the Yucatan, Belize and even stretching into Northern Honduras. These cities comprised massive step pyramids topped with lofty temples often crowned with elaborate roof combs. There were labyrinthine palaces built of stone on vast acropolises, extensive plazas all coated in white stucco, and as far as the eye could see houses becoming grander and more elaborate the nearer the centre. These cities were covered in stelae, huge carved stone statues, commemorating the deeds of their kings, the so-called divine lords. The pyramids, temples and palaces were invariably painted in a garish blue or red which, when combined with the brilliant white stucco finish of the plazas and causeways, must have been a dazzling sight.



*Palenque, perhaps the most beautiful Mayan Classic city.*



*Impression of Mayan city of Tikal at its height*



*Maya area with principal sites.*

I was fortunate in joining a dig organised by an American university at the Ancient Mayan city of Cahel Pech in Belize. Although a relatively minor city, it was close to the Classic Maya epicentre. The famous Mayan metropolis of Tikal is about 40 miles to the west, Caracol another huge Ancient Mayan city was about 40 mile to the south, Naranjo, a rival of both these centres, about 30 miles to the north west, and myriad other cities large and small were all within a 100 mile radius. Cahel Pech was one of the longest occupied Mayan sites. It is thought that it was first settled around 1000 BC and was occupied continually for about 2000 years. The city which we see now, much of which has been skilfully restored in recent years, mostly dates from the late Classic Period around 700 AD.

I arrived at St. Ignatio a modern town next door to Cahel Pech on Saturday 5<sup>th</sup> July, not really knowing what to expect. Over that weekend the rest of the contingent arrived, about twenty-five students and post-grad students, from various universities across America, (there were also two from the UK). They had booked a month's dig as part of the various archaeological courses that they were pursuing. They all gave me a good forty years, if not more, but they were a great bunch, very bright and enthusiastic, and I must say that they did look after this old man! We started digging at Cahel Pech on Monday. We were divided into four teams, each team digging at a different location. There were four in our team, our job was to dig a hole two metres by two metres in an erstwhile plaza surrounded by the remains of pyramids, temples and palaces, some of which had been excavated, some of which had not. The intention was to dig down as far as we could, basically to find out what there was to find out. The other teams had similar roles, one was digging through the remains of a temple on top of a pyramid, one was digging through the foundations of what was understood to be a palace, and the remaining team was digging trenches in an area between two pyramid structures in an endeavour to find a tomb.



*One of the many ancient (and restored) plazas at Cahel Pech.*



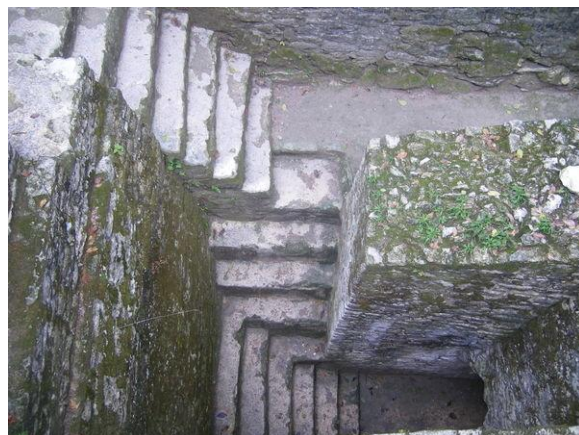
*Pacal's sarcophagus lid*



With my team, in the first week and a half, we went down about two metres. Although we did not find anything spectacular, we unearthed lots of pottery, animal bones, worked obsidian and chert. Perhaps the most interesting 'find' was the many layers of stucco flooring that we exposed. These two metres probably represented over one thousand years, from about 200BC to 900AD. This would have covered the whole of the Mayan Classic Period, about 300 AD to 800 AD, a bit of Terminal Classic, from 800AD and a bit of pre-Classic, prior to 300 AD.

The Ancient Maya invariably coated their plaza surfaces with brilliant white stucco, our digging exposed seven discernible levels of white stucco interspersed with rocks and dirt.

To my mind the most exciting find was by the team excavating the temple on top of a pyramid. They exposed walls and doorways, and were able clearly to discern the temple building, and the intricate stonework. The team found the tomb that they were looking for, but alas it had been plundered long before by looters, there was nothing left. As in other parts of the world looting has been (and still is) a great problem in the Maya area. Again, as in other parts of the world, most of the really serious looting was carried out in ancient times, long before the arrival of Europeans.



*Down a hole in Cahel Pech*

Tombs generally never contained the riches found in ancient Near Eastern or Egyptian burials, but some treasures have been discovered, probably the most famous being that wonderful sarcophagus of King Pacal in the temple of Inscriptions at Palenque in Mexico

The ruins of the great majority of Mayan sites found today invariably are of structures built in the late Classic period, that is to say between 600AD and 800AD. However Mayan sites had generally been occupied for many centuries previously. To the Maya everything, including buildings and even plaza floors had a spiritual life form. The Maya did not demolish buildings instead, they ritually terminated their existence, to the intent that the building's spirit was rejuvenated by superimposing a new building over the older structure. Consequently each time a building is excavated today, invariably a series of older structures are exposed. Sometimes superb stone or stucco artwork which was completely covered, and consequently remained well preserved, by the construction of the next phase, has been exposed to the delight of the archaeologists.

What surprised me about this digging process was that it really was quite destructive. There were teams of us hacking away at walls, floors and other structures, which had been in situ, undisturbed, for hundreds and even thousands of years. But really it was unavoidable. For a structure to yield its secrets, it was clearly necessary to hack into it. Modern scanning techniques, although starting to be used in the Maya area are very expensive. Excavation is still predominantly people chopping away at structures. But there are a lot of structures, teams of archaeologists could work continually on one large site for years, and still only a small part would be excavated. There are hundreds of such sites in the Mayan area, and it is estimated that even now more sites are waiting to be discovered. Archaeologists can only ever scratch the surface.

***TO BE CONTINUED NEXT MONTH***

## DATES FOR YOUR DIARY

DATE	EDAS EVENTS – 2015
11th February 2015	EDAS Lecture – The Protected Wrecks on the South Coast, with Sara Hasan, Nautical Archaeology Society (note this is a change of speaker)
13th February 2015	Great Dorset Archaeology and Mystery Quiz – 7.30 pm Priest House Museum, Wimborne. Tickets £5, for more details ask Bryan Popple or Andrew Morgan
11 <sup>th</sup> March 2015	EDAS Lecture – Life & Death in Pompeii and Herculaneum, with Paul Roberts Curator British Museum. <b>To be held at the Marconi Lecture Theatre, Bournemouth University</b> <b>Check website for details or contact a Committee Member</b>
25th March 2015	EDAS AGM followed by members' evening with: Brian Maynard on the 2014 Field Trip to Lincolnshire, and Alan Hawkins about the recently surveyed Dorset Canal
8th April 2015	EDAS Lecture – Catalhoyuk Neolithic Settlement, with Professor Peter Andrews, Curator of Blandford Museum
13th May 2015	EDAS Lecture – The Portable Antiquities Scheme and the Treasure Act, with Ciorstaidh Hayward Trewarthen, Dorset Finds Officer
14th to 19 <sup>th</sup> June 2015	EDAS Field Trip – Cambridgeshire area. Led by Keith and Denise Allsop. Details to follow.

**Note:** unless otherwise stated all lectures start at 7.30pm and are held at **St Catherine's Church Hall, Lewens Lane, Wimborne, BH21 1LE.**



## East Dorset Antiquarian Society

### NOMINATION FORM

#### Nomination for a General Committee Member:

<b>Name of Nominee</b>		<b>Nominee's signature</b>	
<b>Name of Proposer</b>		<b>Proposer's signature</b>	
<b>Name of Secunder</b>		<b>Secunder's signature</b>	

Please return the completed form to Brian Maynard, 7 Verity Crescent, Canford Heath, and Poole, BH17 8TH or [brian.retired@ntlworld.com](mailto:brian.retired@ntlworld.com)

**Contact Telephone Number:**

**Date:**