



Aylsham Roman Project



AYLSHAM ROMAN PROJECT

PERIODICAL – Winter 2017



FOREWORD

May I begin by wishing you all a very happy new year. We are now at the midway point between our dig last year and this year.

So what's been going on you may wonder? Well the answer is...a lot! All the finds from the August 2016 dig have now been counted and weighed. Somewhere in the region of 27000 items have been carefully looked at and sorted into pottery, kiln fabric, building material, flint, bone, charcoal etc. All finds are bagged up and numbered with the site and context number. My house is now full

of boxes and bags of Roman bits and pieces! We are now beginning the pottery report, with the help of several volunteers... thank you. Pottery from each context is being sorted into base, rim and body sherds. The report will take many months to complete, but it will tell us so much about where the pottery came from (made on site or brought in from elsewhere), age of the pots and the types of pots being made.

Julie Curl, our local bone and animal print specialist has been looking at the animal remains found in the waste pit. She is also looking through all the pieces of tile which have a multitude of animal footprints on them, giving us a great idea

of what was running around on our site 1700 years ago. Reports on all of this to follow.

A piece of charcoal from the rake pit of kiln 1 was sent to Miami for C14 dating, read on for the report.

We have two specialist talks coming up in February, one on pottery by Alice Lyons and the other by Julie Curl on animal bones and footprints. I am very much looking forward to both. At the end of February we are meeting with Britannia Archaeology, Norfolk Museums and Historic England to plan the August 2017 dig. Details of which will appear here in a couple of months.

Finally, I must as always say a big thank you to everybody who is involved with this project in any way. As you probably

are aware, we were awarded 'Best Community Archaeology Project 2016', by the council of British Archaeology, which shows we must be doing something right!

At the time of writing, we have 195 days until we can get our trowels out again, not that I'm counting! I will now hand over to the brilliant people from Britannia..... Peter.

Peter Purdy – Director Aylsham Roman Project



Radiocarbon dating – how it works and why we use it in archaeology

By Martin Brook (Britannia Archaeology)

As you all may know, we sent a sample of charcoal from the rake pit associated with Kiln 1 for radiocarbon dating. It occurred that it may be that while we're sure a lot of you know what radiocarbon dating (commonly just referred to as C14 dating) is, a look at how it is actually used may be insightful.

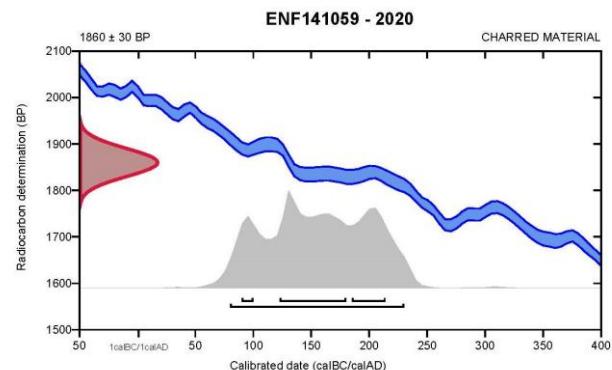
Radiocarbon dating is one of the best known archaeological dating techniques available to us. Invented in the 1950s by the American chemist Willard F. Libby it is still the best and most accurate of dating techniques devised, but how does it work?

All living things exchange the gas Carbon 14 (C14) with the atmosphere around them. When an organism dies the C14 in a dead organism slowly decays at a known rate: this is referred to as its "half-life". The half-life of an isotope like C14 is the time it takes for half of it to decay away: in C14, every **5,730** years, half of it is gone. So, if you measure the amount of C14 in a dead organism, you can measure how long ago it stopped exchanging carbon with its atmosphere.

There are two techniques in measuring radiocarbon in samples, the technique we most commonly use is Accelerator Mass Spectrometry (AMS). Mass spectrometers detect atoms of specific elements according to their atomic weights.



The Aylsham C14 sample just prior to testing



Once the testing is complete we are presented with a range of dates that have a probability rating based on the type, condition and origin of the material tested. These ranges are given to us as archaeologists to use alongside the other evidence collected on site (usually pottery dates and stratigraphic relationships) to help us interpret the nature of the archaeology.

Carbon dates are expressed in two ways. The first relates the date of the sample to the discovery of the dating technique itself. The age will be given in years before present (BP) where "present" is defined as AD 1950. We are then also given a date that fits in with our standard recording of years.

For example, the Aylsham sample came back with a 95% probability date range of "Cal BP 1875 to 1715", which translates to;

AD 75 to 235

We must always view these dates with a certain amount of scepticism however, samples can become contaminated (the level of any contamination effects the probability date range) and materials tested could be intrusive in the context (it's always best to get a sample from a nicely stratified and secured layer). It should also be noted that the carbon date applied to a charcoal sample (like the one from Aylsham) will reflect the date that

the tree stopped taking in carbon, i.e. when it was cut down.

This should all be taken into consideration when using the data. When we look at this date range along with the preliminary pottery dates of mid-2nd to mid-3rd century it does corroborate. It is entirely possible that the tree this piece of charcoal came from was felled and then later used in the construction of the kiln, as fuel in the kiln or was used elsewhere and thrown into the rake pit at the same time the kiln was opened.

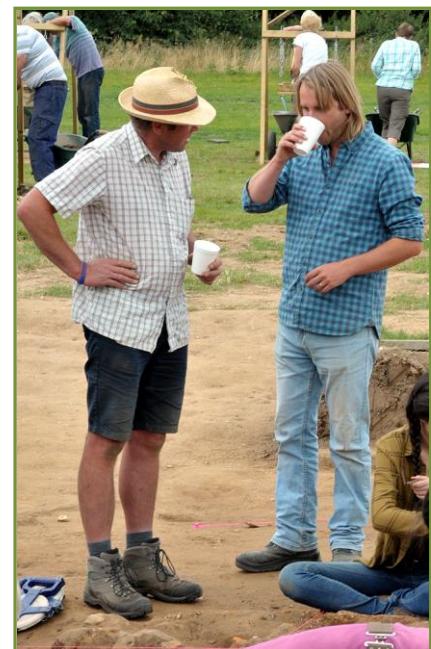
More carbon dates are planned for the material recovered at Woodgate and there will be ample chance for those who are interested to gain more information on the processes involved and maybe even help in the sample preparation.

In the meantime if you would like to know more I highly recommend looking at Beta Analytics website (below). The people at Beta did a great job getting this sample done for the project and they have lots of information on various dating techniques and the pro's and con's associated with each.

Alternatively if you have any questions please feel free to give me an email.

Martin - February 2017

Beta Analytic:
www.radiocarbon.com



Zooarchaeology – The study of faunal remains.

By Julie Curl - Sylvanus

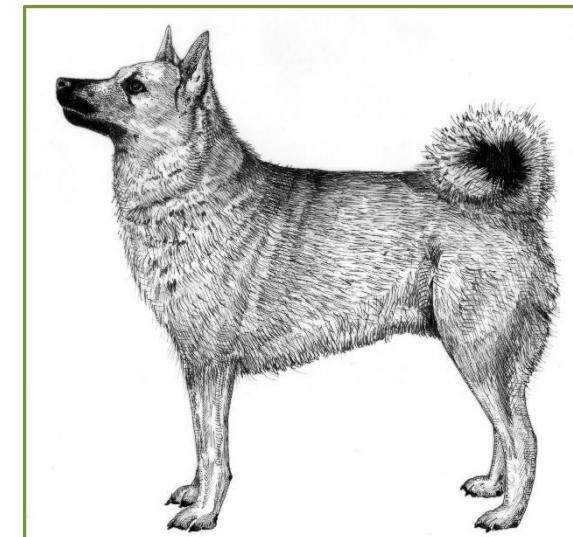
Zooarchaeology aims to achieve a better understanding of the relationships between humans and the domestic and wild animal populations around them. The discipline also attempts to gain knowledge of the environment that people are living in.

When undertaking an analysis of the animal bones, the first stage is to sort the bone by context and species. Each bone is examined for butchering marks, pathologies and other modifications. Bone is recorded with the type of butchering mark (chop, cut, sawing, etc) and its location on the bone. Recording the butchering evidence can provide information on domestic and wild species used for meat, skins and other by-products, such as horn. Common butchering evidence, such as fine cuts on the foot bones or the head can be interpreted as skinning, knife cuts on the inner body of the lower jaw is usually tongue removal for meat and chops at the base of horncores means they have been removed for hornworking.



The range of species identified can help us to understand activities. An assemblage consisting of just domestic animals (cattle, sheep, pigs and

chickens) can indicate a self-sufficient and modest community, able to survive on production of their own meat, dairy, leather, wool and by-products. Sites with a wide range of species, including deer and a range of birds that have been butchered strongly suggests both hunting activities and high status eating. With



Julie's reconstruction of the dog whose remains were found in the central rubbish pit between the two kilns

deer in the medieval period there is even a strict hierarchy for distribution of the body parts for meat, so it may even be possible to determine if it is the waste of the deer park keeper or from consumption of the king. There is a strict hierarchy for keeping falcons too and the recovery of bones of a Peregrine indicate an Earl, while a Gyrfalcon would have belonged to a King. Bones of a Barbary Ape and a parrot in Late Medieval Norwich demonstrated trade with Africa into a wealthy city.

Measurements are taken of selected bones, following standard guidelines. The metrical data obtained can allow calculations to be made to estimate heights and stature of animals, sex and breeds. From the measurements we can see changes in the size of domestic animals and improvement and selected breeding through periods.

Pathologies are recorded with their descriptions and locations on elements and the body. One of the most common of the bone changes seen is arthritis, as common on animals as it is people. Horses regularly suffer with growths and fusion of the lower limb bones and cattle suffer similar problems as they were traction animals. Diseases such as



tuberculosis can leave evidence on the bones and has been passed between people and cattle since prehistoric times. Healed injuries on bones can often show human intervention and continued care. Domestic birds such as geese and duck sometimes have broken wings that have healed, showing their wings were broken in an attempt to keep them on site for a supply of eggs, meat and feathers.

Soil samples can provide a plethora of small species, often bones of rodents, fish, herpetofauna small birds. These tiny bones may add to the dietary evidence and provide information on the environment of the site during habitation. A good knowledge of wildlife is important with these bones to understand habitat requirements and behaviour and their significance in archaeological deposits.

Julie – February 2017

<http://www.sylvanuservices.com/>



Is there an aspect of archaeology that you would like us to cover in the next periodical? If so, just email;
aylshamromanproject@gmail.com
and let us know.



Why do Archaeology?

By Dan McConnell (Britannia Archaeology)

A question we're often asked (normally by people who have to pay for it) is; 'Why do archaeology?'

The response is always a bit of a tricky one (and normally a slightly panicked justification as to why a landowner is having to dig many holes in a field that's been ploughed for the last fifty years), but it all boils down to one statement; 'I love it'.



It's not the cold, rainy, muddy and sharp flint ridden trenches that make it so enjoyable, neither is it the short time constraints and long drawn-out desk based assessments. It's digging up something untouched by human hand for the last two millennia. It's piecing together different coloured soils into a Roman enclosure or Bronze Age settlement. It's teaching someone new to the profession how to dig. It's being able



to see parts of a local landscape thousands of years ago. It's being able to save something that otherwise would be destroyed. It's all of these things and a lot more. Everyone's got a calling in life, and some of us are lucky enough to do this calling every day.

It really doesn't matter if you've got a degree in archaeology, what matters is a passion for it. Even if you can only afford to spend one day every few months getting involved with the profession, be it volunteering at a local museum or helping hack out the fills of a well on a site, you're still an archaeologist. Get outdoors (or indoors), pick up a trowel (or sit at a PC) and get involved. You won't regret it.

Dan – February 2017

Further Information:

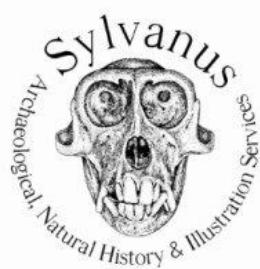


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