ESSEX EGYPTOLOGY GROUP

Newsletter 109 August / September 2017

DATES FOR YOUR DIARY

6th August	**Short talks, book auction and annual general meeting**
3rd September	**Justice in ancient Egypt: Alexandre Loktionov**
1st October	**Ancient Egyptian Furniture: from the earliest to those "wonderful things" of the New Kingdom: Dr Geoffrey Killen**
5th November	**Hedgehog boats: Dr Penny Wilson**
3rd December	**Papyrus Berlin, a Middle Kingdom mortuary ritual reflected in writing: Ilona Regulsky**

Our August meeting will feature short (10-minute) talks by members, our Annual General Meeting, and a book sale and book auction in aid of the EES Excavation at Sais.

In September we welcome Alexandre Loktionov who is currently working on his PhD in Egyptology at Cambridge. This talk will provide an introduction to the legal system of Ancient Egypt, covering both its ideology and its practice. Particular attention will be paid to the concepts of sḏm ("listening") and wḏ'-mdw ("dividing words"), which are both central to Ancient Egyptian court procedure. The talk will also address the functions of different types of court, the place of Maat in the legal framework, and the possibility of foreign influence on the legal system. Case studies will be drawn from all periods of Egyptian history prior to the end of the New Kingdom, from 5th Dynasty Memphis to 20th Dynasty Deir el-Medina.

January Lunch

Alison Woollard will, once again, be organising our January lunch at Crofter's Wine Bar and Restaurant in Witham. Put the date, 7th January 2018, in your diary. She will be taking deposits of £5 per person from October onward.

Chairman's Corner: How to be an armchair archaeologist

With the advent of the smartphone many scientists have begun harnessing the downtime of thousands of ordinary people to analyse scientific data much more quickly than would otherwise be possible. This is a process known as 'crowd-sourcing' and it enables members of the public to undertake non-specialist tasks (such as transcription or the identification of

simple features) that contribute to scientific analysis and human knowledge. Cancer Research turned scientific analysis into a game that people could play (http://www.cancerresearchuk.org/support-us/citizen-science/the-projects) and astronomers have been using members of the public to classify galaxies, speeding up analysis of telescopic data (https://www.galaxyzoo.org).

Fig 1: High resolution 100x100m satellite image tile of Peruvian terraces, from the Global Xplorer crowd-sourcing platform.

All of these projects make use of public interest in science, our low tolerance for boredom and the ubiquity of our smartphones (or computers). The online platforms for these projects are ergonomic, easy to use, with minimal training requirements and high levels of satisfaction for the user, so that instead of downloading a game we'll spend our commute analysing data. It means that literally anyone can now be directly involved in scientific analysis, including archaeology. You can now get directly involved in Egyptology and make a huge contribution to archaeological research, all without leaving your home.

Sarah Parcak's much publicised Global Xplorer platform (https://www.globalxplorer.org/) is a crowd-sourcing project that asks members of the public to identify looting in satellite images (Fig 1). It currently covers Peru, although further countries will be added in future. Global Xplorer is easy to use and you can find my full review of it at https://hannahpethen.com/2017/02/07/global-xplorer-satellite-remote-sensing-looting-and-crowd-sourcing/.

The Micropasts website (http://crowdsourced.micropasts.org/) is a great crowdsourcing hub for various archaeological projects, where you can choose something that suits your interests. They need a wide variety of different tasks completed, from linguistic translation to cropping out backgrounds from photographs. They don't have any Egyptology projects at present, but I'm sure that will change in the future.

In July 2017 is the relaunch of the Ancient Lives Project, which uses crowdsourcing to transcribe and catalogue papyri from Oxyrhychus (http://www.papyrology.ox.ac.uk/Ancient_Lives/). You don't need any language skills and you'll be helping to speed up the process of Egyptological research (https://www.ancientlives.org/).

If your interests extend beyond archaeology, Zooniverse has a wide range of different crowdsourcing projects you can get involved in, including language and history (https://www.zooniverse.org/about). And if you fancy something a bit more hands-on there's the Digventures website (https://digventures.com/projects), which is primarily a crowdfunding (like 'crowd-sourcing' but you contribute money instead of time) website that aims to fund archaeological excavation, mostly in the UK. Contributors can participate digitally through their online portals, and there are further opportunities for more hands-on involvement, ranging from a day of digging with trained archaeologists to a fieldschool. You pick a project that interests you and choose which level of

Fig 2: Amarna Object Card TA.OC.35-36.047 from the 1935-6 season. Amarna object cards were transcribed by volunteers as part of a Micropasts crowd-sourcing project. ©Egypt Exploration Society (https://www.flickr.com/photos/egyptexplorationsociety/18858667595/in/album-

involvement and financial commitment you prefer. All their data is uploaded online so it's easy to see what they're doing. There's a huge amount of choice, and although Egyptological projects will come and go, there's always something on in the crowdsourcing world. So if you have a desire to be an armchair archaeologist, contributing directly to scientific analysis, or even try your hand at excavation, there should be something for you.

Hannah Pethen

"Hatshepsut's Temple at Deir el Bahri" Sergio Alarcón Robledo

At the beginning of June Sergio Alarcón Robledo came to talk to us about the work he's doing as part of the Polish-Egyptian Mission at Hatshepsut's temple at Deir el Bahri. His talk was in two parts - first the theoretical underpinnings, then the practical work he's been doing at the site. And after the formal talk was over he also showed us some unpublished imagery he's been making of various tombs.

Robledo started by zooming out to a very wide-angle view of the subject - he showed us a picture of a pre-dynastic burial, of a pyramid, of the temple of Montuhotep II (built at Deir el Bahri before Hatshepsut's one), of a tomb in the Valley of the Kings. The unifying theme is that they are all ways of connecting the deceased with the cosmos. At first they just put the body in the right position facing in the right direction, but over time the requirements to enter the afterlife became more elaborate. Mummification became necessary, coffins became necessary, tombs became necessary and so on and so forth. But there was always the same underlying function of connecting the deceased person with the cosmos. And it's important to keep this in mind when thinking about the form and function of Hatshepsut's temple - it was always intended to connect her with the cosmos.

Why is Hatshepsut's temple important to understand? It's partly that she was the first Pharaoh that we have evidence for the construction of this sort of temple (called a Temple of Millions of Years). So understanding her temple helps with understanding the later ones (which are presumably modifications and elaborations of this one).

Robledo next told us about who Hatshepsut was and her historical context. The temple was built shortly after the end of the Second Intermediate Period, in the early New Kingdom period. Kamose, the last Pharaoh of the 17th Dynasty, had begun the reunification of Egypt from his power base in Thebes. His successor Ahmose (now thought to be Kamose's nephew, rather than younger brother) completed the job and is considered to have founded the 18th Dynasty. He was succeeded by his son, Amenhotep I, who in turn was succeeded by an unrelated man called Tutmosis I who married Amenhotep I's sister in order to legitimise his rule. His son by that wife, Tutmosis II, succeeded him and was married to his half-sister Hatshepsut, a daughter of Tutmosis I by a different wife. Once Tutmosis II died he was succeeded by his son Tutmosis III, who was Hatshepsut's step-son. As Tutmosis III was an infant when his father died Hatshepsut became his regent, and later ruled in her own right as Pharaoh and Tutmosis III only truly inherited power after she died. The important point to take away from this brief genealogy is that Hatshepsut did not have royal blood - it's not just being a woman that puts her legitimacy on shaky ground.

So Hatshepsut needed to assert her power and her legitimacy, and her choice of site for her temple is strongly influenced by these needs. Robledo talked a bit about the surrounding area and what large scale buildings were there before Hatshepsut's temple was built - by and large what one thinks of as the features of the area were built later. When she started her building programme there was Montuhotep II's temple, built some 500 or so years earlier, and some buildings at the sites of Karnak and at Medinet Habu which were also from the Middle Kingdom. So Hatshepsut is starting the first monumental building programme in the area for some time - showing herself to be as true a Pharaoh as the great Pharaohs of old. And she is deliberately putting her temple next to that of Montuhotep II to associate herself with him - he was the reunifier of Egypt at the start of the Middle Kingdom.

Having talked about why Hatshepsut would want a temple, and why she put it where she did, Robledo next discussed the temple itself in a bit more detail. Foundation deposits are a rich source of evidence for archaeologists investigating Ancient Egyptian buildings. These were buried before a monumental building was constructed and contain lots of objects some of which have inscriptions giving the Pharaoh responsible for the building etc (see below a photo I took in the Met Museum in 2015 of a reconstructed foundation deposit from Hatshepsut's temple). It's not actually known what the precise purpose of these deposits was from an Ancient Egyptian perspective - presumably they had some sort of ritual significance. Generally they're buried at particular places under a building plan - like entrances or corners. One thing that's interesting about Hatshepsut's temple at Deir el Bahri is that the foundation deposits don't seem to line up with the structures which were built on top of them. So Hatshepsut (or her architect) must have changed the design after the project was started.

The temple layout is very complex in a religious sense - it's not just dedicated to the royal cult or to a single god. Instead there chapels within it dedicated to Hatshepsut and to several gods. One possible reason for this is to make it less likely to be destroyed after her death. A temple that was just for her funerary cult could easily be destroyed after her death if her successors decided she was not a legitimate Pharaoh (as indeed happened). But destroying a temple to several important gods would be more difficult to justify theologically. This would mean that Hatshepsut's concern for her own legacy would set the template for future Temples of Millions of Years even though those Pharaohs wouldn't have the same concerns about their legacy.

The non-religious iconographic program of the temple is very much focused on Hatshepsut's power and legitimacy. Among others it includes scenes detailing her divine origin and birth, and showing the expedition to Punt that she ordered. This is the first temple we know of that included these sorts of scenes (rather than of Pharaoh worshipping deities and so on). One thing that Robledo pointed out specifically is that there's no actual evidence that this temple is a funerary temple - and in fact there is a theory proposed by Martina Ullman that it is not.

After a break for coffee and cake Robledo moved on to the practical side of his talk. He started by talking about how it feels different excavating at Deir el Bahri than it does excavating at other sites - because there have been 150 years of excavation at the site, and much restoration work as well. So the context of anything that's excavated is very dubious as it's very likely to have been dug up and moved around in the past. And some parts of the temple that you see are replicas, replacing the real objects that are in museums around the world.

The first phase of discovery of the site, in the 18th and early 19th Centuries CE, was exploration by Western travellers and Robledo showed us some drawings from c.1840 CE which include views of the Coptic monastery which had been built on top of the temple. These are now some of our only records of that structure as it was destroyed during the excavation of the temple. The first archaeological excavations were carried out in the 1850s and 1860s by Auguste Mariette, and during the time much of the structure was uncovered. Édouard Naville carried out work in the 1890s and 1900s funded by the Egypt Exploration Fund (including destroying the Coptic monastery), and after him Herbert Winlock excavated in the 1910s and 1920s funded by the Metropolitan Museum of Art. Robledo showed us photos from these latter two excavations - scenes of hundreds of workers working simultaneously, as many as 800 were

employed on the digs. This vast army of workers would be difficult to control and direct carefully, and in any event the archaeologists leading the excavations cared less about the sorts of details that modern archaeology is built upon. This means that a lot of information about the temple, its use, construction and so on, was destroyed in these excavations.

The Polish-Egyptian Mission, of which Robledo is a part, is a very large mission by modern standards - there are over 60 different projects going on at the moment, ranging in size from someone's PhD thesis to much larger multi-person projects. Robledo is working on the Upper Courtyard at the temple, and he is interested in what the original layout was and how it's changed over time. There are various ideas about how many columns filled the courtyard - completely full, 2 or 3 rows around the edges, with varying ideas about spacing which may or may not have been symmetrical. In most other archaeological sites you would carefully excavate the floor of the courtyard looking for evidence of foundations. However at Deir el Bahri the site has been dug over and reconstructed so much that this isn't possible - foundations have been disturbed or columns/foundations have been added by archaeologists to recreate their own preferred theory.

So Robledo is approaching the problem obliquely. One approach he's using is to investigate a later Ptolemaic era structure built using elements of Hatshepsut's original courtyard. This structure, a portico, crosses the original rows of columns in the courtyard and it had 3 columns on each side. One possibility is that there were three rows of columns originally and the Ptolemaic era architects put a roof across 3 pairs of existing columns. Alternatively if there were 2 rows of columns in the original courtyard then the Ptolemaic era architects would have needed to add an outer pair when building their portico. So Robledo has been trying to find evidence for when the outer columns were built. So far everything is inconclusive - for instance he's found a piece of pottery at one of the foundations, but it is of a style that could be of any time from Hatshepsut's time onward so doesn't rule out either possibility.

Another approach he's employing is to use modern imaging technology to help virtually rebuild some of the architrave from the courtyard. This is in over 700 pieces, and he is creating a virtual 3D model of each piece. In future he'll be able to put it together like a jigsaw puzzle and look at where the architrave sockets were.

After the formal part of his talk (and a question and answer session) Robledo showed us some of the other things he's working on. One of his skills is the making of virtual 3D models and so he works with various other teams generating models for them. These are particularly useful in cases where it isn't possible to conserve the objects themselves - like termite eaten coffins which would disintegrate as soon as any attempt was made to move them. All the stuff he showed us at this point is unpublished which was exciting to see - for instance he showed us some images from new tombs that have recently been discovered in Aswan. One of the things I found particularly interesting about this talk is that there's still new stuff to discover at a site like Hatshepsut's temple at Deir el Bahri which has been dug over by so many archaeologists over such a long period of time. And the insights into what the thinking was behind Hatshepsut's choice of site and design.

Margaret Patterson

"The Amarna Stone Village" and "Amarna Blue" Anna Garnett

In July Anna Garnett came to talk to us about pottery from Amarna. Garnett has recently become curator at the Petrie Museum and is also working on analysing the pottery that has been found at the Amarna Stone Village, which is the work she was telling us about during the first part of the meeting.

The Amarna Stone Village

The Stone Village is a village near the main city of Amarna that has been excavated in modern times between 2005 and 2010. The bulk of the site has been published in 2012 and Garnett is

adding to this by analysing the ceramics that have been found (there was a ceramicist with the original excavation but he left before the work was completed and Garnett joined the team in 2015). On the surface the site is formed of stone boulders in marl clay, hence the name, and was identified as being of interest in the 1970s by Barry Kemp (and sadly looted between then and the time of excavation).

The site is an area of dense settlement, with evidence that people lived there (as opposed to just worked there). The buildings were made of stone, and probably roofed with some kind of natural material (but it's not known what). They seem to have been one storey buildings, with no evidence for staircases (unlike the village at Deir el Medina) and they were not laid out in a regular layout. In general the site appears to have been more ephemeral than the comparable village at Deir el Medina or in the other Worker's Village at Amarna itself - there are no centralised water storage areas, no gardens, no temple or chapels. This is perhaps an indication that they were lower class/status workers than the elite workers in the other two villages.

So who lived there? There's evidence that these were family dwellings rather than barracks style places. There were domestic items found, including Taweret amulets (which are associated with childbirth). Of the four tombs excavated in the area one contained a child, again indication of families living there. The population was probably between 100-150 people, assuming that there were around 5 people per building, this is about half the size of the Worker's Village. There was a perimeter wall, but not as sturdy as the one at the Worker's Village. Garnett told us that not all the site had been excavated as yet because there wasn't enough time (or money for more time) and although the trenches were spread across the site to give an overview of the area it's possible that when more can be excavated the ideas about the site will change.

Around the main site of the village there are also peripheral structures, including a possible guard post. It is also surrounded by an ancient road. This is a significant feature in the landscape at about 4m wide although it's not clear if this was an integral part of the site or not as no archaeology has been done on the roads. It's possible that they separate parts of the site, or possibly they were used by guards to patrol the site - either to protect or police the people. One of the things that Garnett wants to do with her work is to map the current pottery finds, and then survey the roads herself to see what can be discovered about the function of these roads.

Garnett circled back to the question of who lived in the village. It was perhaps the labourers for more mundane jobs than those done by the ones in the worker's village. Possibly they were involved in quarrying out the tombs, and one piece of evidence supporting this is the presence of basalt chips in the village. The tombs were carved into fairly soft limestone cliffs, and this work would have been done with basalt tools - although needing to be shipped in from other places this was still cheaper than using copper tools. Another possibility is that the village was involved as a way station in supplying expeditions out to the desert. It is certainly true that the workers were engaged in manual labour - the bodies discovered in the burials at the site all show signs of this type of work.

Another possibility for the function of the village is by comparison with the site at Deir el Medina. At that site as well as the worker's village and the Valley of the Kings over the mountains there is also another set of structures about halfway between. These have been variously suggested as places the workers rested during the weeks rather than commuting home every day, as storage areas for the expensive materials and tools used in their work, and as check points to make sure they weren't taking the expensive items home for unauthorised use. The Stone Village may also have provided bread for the workers at the tombs of Amarna (or expeditions into the desert) as extensive bakeries were found which were excessive for the local population. However there is evidence against this sort of role for the Stone Village - including that there is no physical link, such as a road, between the Amarna Worker's Village and the Stone Village. There is also evidence that the Stone Village was occupied earlier than other parts of Amarna (including the Worker's Village), starting from Year 4 of Akhenaten's reign. And it may also have been abandoned earlier. So perhaps the two villages represent different phases of the construction of the tombs at Amarna.

Garnett now moved on to tell us about the ceramic study of the Stone Village site, which is what she is actually doing. For most excavations the primary question that the pottery remains answer is how old the site is and for how long the site was occupied but at Amarna the dates of the site are securely known - Akhenaten founded the city in Year 5 of his reign, and it was abandoned shortly after his death some 20 or so years later. This means that Garnett is free to concentrate on the other questions that the pottery can answer. Another thing that makes this study particularly interesting is that the site was inhabited entirely by a non-elite population.

The questions Garnett is interested in answering are about what the pottery can tell us about the use of the space at the Stone Village - what activities went on there, and can anything be discovered about what particular spaces were for. She is also trying to see if the sorts of people and activities at the site can be narrowed down any further from the current rather broad theories. The pottery can also be used to compare this site with other sites - how does it fit into the broader picture at Amarna as a whole? How does it compare to the Worker's Village? And how does it compare to other sites across Egypt at this sort of time period?

Garnett is currently working her way through the approximately 3000 pottery fragments that have been excavated at the site, and re-confirming or re-evaluating the original identification. Some of her work so far has to do with the storage of water at the site. She has found evidence of lots of large pointy amphorae, and also of large water storage vessels of a type still used to store and keep water cool today in Egypt. As with the Worker's Village there is no well or water source at the Stone Village, so water needed to be brought in the amphorae to the site. However at the Worker's Village there is an obvious place where the remains of water storage vessels are found - so there was a centralised water distribution system. In the Stone Village the storage vessels are smaller and more widely distributed across the site. Perhaps this means that every household had its own storage arrangements. It may also be further evidence that the site was primarily used to supply people travelling into the desert.

90% of the pottery found at the Stone Village is made of Nile clay - abundant, relatively local, and cheap. Garnett described much of it as being the ancient equivalent of paper plates, not intended to last long term. However this also means that 10% was of better quality clay which was sourced in the oases. These vessels may have contained wine - but it's not clear if the inhabitants of the Stone Village were drinking the wine or if they were given the vessels to use after other people were done with them. There are also some fragments of blue painted ware, which is a high status and good quality ceramic and very rare in the Stone Village.

To conclude this part of her talk Garnett reminded us that this is very much a work in progress. She's now almost completely catalogued and categorised the pottery, and will be spending the next 12-18 months analysing the data she has before writing it up for publication.

Amarna Blue

After a break for coffee and cake Garnett moved on to the second (related) talk of the afternoon. Instead of looking at her work on a particular site, this time she was giving us an overview of her favourite type of pottery: Amarna Blue. This is one of the rarer types of pottery found from Ancient Egypt - not cheap and disposable, instead a fine ware. There are various names for this pottery type - Amarna Blue, Blue Painted Pottery or Malkata Ware. It is characteristic of the New Kingdom period (1550-1069 BCE), primarily during the 18th Dynasty, and evidence for the emergence of highly decorated luxury goods during this affluent period (for the elites). The blue colour is achieved using the chemical $CoAl_2O_4$ which is generally painted on before firing. This material is not easy to get hold of - it's only found and mined in either the Dakhla Oasis or in the Sinai peninula - making it a costly way to decorate your pots. The pots themselves were made in Amarna, Malkata (next to Deir el Medina) and Gurob (in the Faiyum) all of which are near palaces and places that the elites live.

Garnett showed us several examples of this type of pottery. The decoration often features floral themes, and other themes from nature. The designs aren't just painted on, sometimes there are moulded elements like the gazelle head modelled on one of the jars in the photo above (taken by me in the NY Met a couple of years ago). Other common decoration elements can include moulded Hathor heads and lotus flowers. One interesting frequent motif is a flowered garland painted around the neck of the jar, and it seems that these were painted representations of something that was done in reality. Tomb reliefs that show jars (like those from Nebamun's tomb that are on display in the British Museum) show wine jars with real garlands of flowers round them.

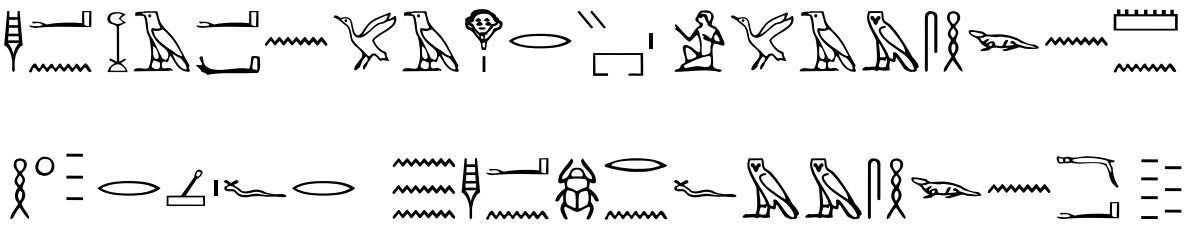
Sometimes the jars are labelled with their contents, for instance there are examples in the British Museum of wine vessels which say not just that they contained wine but where the wine was made. This doesn't just tell us the surface information (the content of the jar) it also tells us something about the trade networks across the country at the time. These jars from a tomb in one area of Egypt contained wine from another area, in a pot made in yet another area decorated with expensive pigments from either Dakhla Oasis or the Sinai.

I don't think I've done this half of Garnett's talk justice - it was mostly filled with Garnett showing us pictures of pottery and enthusiastically explaining what was interesting about this particularly one, which is awfully hard to summarise! I'm often not very inspired by pottery, but Garnett did a fantastic job of conveying her own interest and enthusiasm and bringing the subject to life.

Margaret Patterson

Teaser

What does it say and where do you think it comes from? Answer in the next newsletter



Thanks go to Margaret Patterson and Hannah Pethen.

The Essex Egyptology Group Committee

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