



ESSEX EGYPTOLOGY GROUP - REVIEW

November 2019 Meeting

by Margaret Patterson

"Reconstructing the Mid-Second Millennium BCE

Using Scarab Amulets"

Stephanie Boonstra

At the beginning of November Stephanie Boonstra

(<https://www.ees.ac.uk/faqs/stephanie-boonstra>) came to the Essex Egyptology Group to talk to us about her work on scarab amulets, which were the subject of both her MA and PhD research.

She began by giving us an overview of the importance of these amulets, and the way that they were made. Scarab amulets were the most popular Egyptian amulet from 2000 BCE all the way through to 500 BCE, and they were made of a variety of materials. A typical scarab amulet is clearly modelled on the anatomy of the beetle, although there are also more schematic ones that are more basic. They have a variety of uses: as a seal for administrative purposes, as a funerary item or as an object to commemorate an occasion. An example of this last type are Amenhotep III's lion hunt series of scarabs. The most obvious example of a funerary use is the heart scarabs which have a spell on the base to make the heart lighter than the feather of Ma'at for the Weighing of the Heart judgement after death. However smaller scarab amulets are actually more common in burials than the heart scarabs. Scarab amulets and seals are very portable and are found throughout the Aegean and the Near East as well as Egypt - some exported from Egypt and some made in other countries. Boonstra showed us some examples of scarabs that were made outside Egypt, and said that she would come back to this topic in her first example of a scarab workshop.

So why did the ancient Egyptians make amulets shaped like scarab beetles? This was part of their general tendency to associate deities with the environment (she gave us the example of Sobek and the crocodile). The god associated with the scarab is Khepri, god of the rising sun with aspects of creation and rebirth. It was observation of the scarab beetle life cycle that led the Egyptians to make this association. A male scarab beetle gathers up animal dung as food for its mate and rolls it into a round ball which it pushes around - which the Egyptians saw as being like the sun, so they conceptualised the rising sun as a ball pushed up by a scarab beetle. The female scarab beetle makes an oval ball where she lays her eggs, and then buries this. The Egyptians did not observe this part of the behaviour, so when the newly adult scarabs emerged above ground they thought they were spontaneously generating from the ground itself. So an appropriate animal to associate with birth and creation - both of the sun and more generally.

These amulets and seals can be very detailed representations of the beetles, and one might think they are figurines except that they always have an inscription on the base. Boonstra showed us an example with the anatomy labelled with the real anatomical terms for each part of the beetle. She said that a given scarab amulet would have been anatomically correct for a particular species. During different periods of scarab production different features were depicted or emphasised. A particularly noteworthy example is a feature called the humeral callosity. This is a real beetle anatomical feature (effectively the scarab's shoulders), and they are represented on amulets as two little triangles on the thorax just adjacent to the line separating the head from the body. They are only shown on scarabs from the 18th Dynasty or later, so this can be used to help date amulets. More generally style can be used to date the many scarabs that are found outside securely dated contexts. One of Boonstra's slides had a table of various design features that have been used to create a typology, and from that a timeline using securely dated scarabs. Before this system royal names had been used to date them - with the assumption that if a king was named then it was the current king. Sadly this seemingly easy dating method is not terribly accurate - some king's names appear on scarabs known to have been made significantly after the reign of the king. Senwosret I and Thutmose III are examples of kings whose names show up hundreds of years after their reigns.

Scarabs are made of a variety of materials, and in the next part of Boonstra's talk she went through the various materials and the various ways that scarabs were produced. Some scarabs were made of semiprecious stones, and Boonstra showed us examples of four of these. Carnelian is a common material in ancient Egypt found particularly in the Sinai, the Eastern Desert and Nubia. It's often scattered on the desert floor in small pieces. It is red, orange or brown in colour, and was a symbol of blood, power and energy. Another stone often used was the purple stone amethyst - it was particularly popular in the Middle Kingdom period. Scarabs made from this material were uncommon outside Egypt. Amethyst is found in the south-eastern desert at Wadi el Hudi. Her last two examples were both jasper, which is a form of quartz and both sorts are found in the Eastern Desert. Red jasper, called Khenmet in ancient Egyptian, was popular for beads, amulets and scarabs. It's sometimes confused with carnelian, and she later mentioned that some workshops used the two stones interchangeably. Green jasper was used in Egypt from predynastic times but was more popular outside Egypt. Most of the scarabs made with this material were heart scarabs.

All four of these stones were rated on the Mohs hardness scale as 7 (this runs from talc at 1 to diamond at 10 https://en.wikipedia.org/wiki/Mohs_scale_of_mineral_hardness). As a result it is hard to make beads and scarabs from these materials. First the object was roughed out using flint tools, and then the fine details added using metal tools. The perforations were made with bow drills - we know how this was done for beads from a scene on the walls of the tomb of Rekhmire, and it must have been a similar process for scarabs. Because they were so hard to produce, scarabs made from these materials were an elite item.

Other more easily worked materials were also used to make scarabs. Boonstra showed us some examples of scarabs made of organic materials, this could include amber, gilded beeswax and more rarely animal bone and wood. Much more common was faience. This material was originally used to mimic turquoise, and the colour symbolises life and fertility. Usually it's used to produce small items less than 30cm long, but she mentioned the example of the was sceptre which is now in the V&A which is 7 foot tall!

Faience is made from silica (crushed quartz or pure sand), an alkali (natron or plant ash), lime (burnt limestone) and a colourant (copper for turquoise and cobalt or iron for dark blue). The silica, alkali and lime were mixed together to the consistency of toothpaste and then moulded in clay moulds before being fired which can be done anywhere pottery can be fired. Colour could be added in a variety of ways - mostly commonly via efflorescence (where the colourant was inside the mixture), but also through direct application of a glaze to the surface (where you would see pooling of the glaze in the final object) or by embedding the object in a powdery mixture of colourant during firing (called cementation). The best evidence for production of faience objects comes from finding workshops and Boonstra gave us some examples from across most of Egyptian history: Abydos for the Old and Middle Kingdom period, Lisht in the Middle Kingdom, Malqata and Amarna in the 18th Dynasty and Memphis for the Roman period.

The most common material to make scarabs out of was steatite, and scarab amulets were also the most common use for this stone. Steatite is also known as talc and as soapstone, and it is found near Gebel el Silsila. It is very easy to carve as it has a Mohs hardness of 1. Once it's the right shape it is fired and that converts the stone into actual steatite which has a Mohs hardness of 7, just like the semi-precious stones that Boonstra discussed first. It can be glazed before firing with the same glaze that is used for faience objects, and fired in a kiln or even just a hearth. These scarabs are really easy to make, so the skills needed aren't for the process itself but are for creating the shape of the object.

It's relatively hard to find archaeological evidence for the production of semi-precious stone scarabs because it's hard to distinguish them from bead workshops in general. Faience and steatite scarab workshops are easier to distinguish. Evidence can come from moulds and from wasters, unfinished or broken scarabs that have been discarded. (Wasters refers to objects which went wrong during production.)

Having set the scene by telling us about what scarab amulets were and how they were made Boonstra next moved on to a case study of a workshop and the sorts of things it can tell us about broader issues than just scarab amulets themselves. This workshop is in a place called Tell el-'Ajjul which is near the modern city of Gaza. It has been identified with ancient Sharuhén, which was a Canaanite stronghold in the Second Intermediate Period and was the last Hyksos stronghold to be destroyed at the beginning of the 18th Dynasty. It's at the north-eastern corner of the Delta, north-east of Avaris (the Hyksos capital) and on the trade routes from Egypt towards Syria and beyond. Because it was destroyed at the start of the New Kingdom it forms a sort of "time capsule" for the Second Intermediate Period. The site was initially excavated by Petrie in the 1930s, and Boonstra noted that his excavation techniques didn't transfer well from Egypt to Palestine. More recent excavations have been undertaken by a Swedish-Palestinian team, but this has had to stop because of the conflict in the region.

There is archaeological evidence of a scarab workshop at Tell el-'Ajjul - the raw material is present, and there are unfired scarabs that have been carved but not transformed into steatite - however the kilns have not been as easily found. More indirect evidence for scarab production at the site is the sheer number of scarabs found - over 1200 from a partially excavated site (200 would be a typical number for a site of this size). Boonstra told us that she has identified some distinctive types of scarabs specific to this site. One type has a distinctive head and a shesha back (which has no lines on the back dividing the wings etc but does have side notches). There are two

sub-types of this type - one has a bird and cobra motif on the base, the other has a falcon headed figure facing an erect schematic crocodile. Both are specific to this site and to its trading partners (and generally not found in Egypt proper). Another type has a 'nr' motif on the base - this is a mis-written nonsensical inscription. One theory is that it's a mis-written offering formula but Boonstra said there seems to be too much variation for that to be the case. It seems to have originally been from a single carver who liked the design but didn't understand the hieroglyphs. These scarabs are also found in much larger numbers in Palestine and on the Tell el-'Ajjul trade routes than they are in Egypt.

Boonstra proposes that scarab production in the 2nd Millennium BCE mimics the social dynamics of the time. The decline of centralised Egyptian government during the Second Intermediate Period correlates with the rise of Levantine city states. And during this period you find a lot of scarabs made in Levantine workshops. When Ahmose I reunifies Egypt at the beginning of the New Kingdom the number of Levantine scarabs declines again. The trade dynamics change during the Second Intermediate Period as well. Trade between the Near East and Southern Levant increases, while trade with Byblos reduces. Trade between north and south Egypt declines, and there is more direct trade between the Hyksos in the Delta with the Nubians to the south of Egypt (skipping past the remnants of the Egyptian state by trading via the desert routes). And find spots of Canaanite produced scarabs mirror this - they are found in the Delta and the Near East, and in Nubia but generally not in Upper Egypt.

The scarab workshop at Tell el-'Ajjul had been the subject of Boonstra's MA research, and for her PhD she took this forward in time by looking at 18th Dynasty scarabs. There wasn't much previous work on these scarabs, and she was particularly interested in the changes from the Second Intermediate Period scarabs. In this part of her talk she took us through a handful of "workshops" from the period, which I've put in quotes because often the actual workshop hasn't been found but it's clear that a particular group of scarabs were made in a particular place by a particular team.



Scarabs from Hatshepsut's workshops at the Metropolitan Museum of Art, New York

The first of the workshops she told us about were Hatshepsut's workshops - most of these scarabs were found in foundation deposits for Hatshepsut's temple at Deir el Bahri. There are several deposits and the scarabs were found in deposits G, H and I. About 200 scarabs have been found, nearly all of which are glazed steatite with no examples of faience or semi-precious stones. They were not used in life and were intended for these deposits or for funerary use (and a few have been found in Theban tombs). Almost all the scarabs have been found in the Theban area, which indicates that the workshop is there but it has not yet been discovered by archaeologists. Over half the scarabs have Hatshepsut's name on them, others have the names of Thutmose III, Hatshepsut's daughter, and Amun-Ra. The backs of the scarabs have different details to the Second Intermediate Period ones - including the humeral callosities that Boonstra talked about in her introduction. The features are a combination of new innovations and archaizing ones that look back to the Middle Kingdom - which mirrors her decision to put her temple where she did (next door to Montuhotep II's mortuary complex), and is part of legitimising herself by linking herself to the founder of the Middle Kingdom.

The next workshop that Boonstra discussed is a carnelian or red jasper workshop from the early 18th Dynasty. The craftsmen used one or the other of these stones but don't seem to have had a preference for either nor does the choice seem to matter. The base of these scarabs has a very simple geometric motif, and the backs are all the same as if carved by the same person. They are found throughout Egypt, the southern Levant, Crete and the rest of the Aegean but are more common in the Faiyum so that is probably where the workshop was.

The el Khokha faience workshop is the name for a group of scarabs almost all found in the tomb of the Chief of Craftsmen Neferkhawes on his wife's body. These have the lunate heads and shesha backs that were seen on the Levantine scarabs from the Second Intermediate Period. There are also Levantine influences on the base motifs including the man and crocodile motif seen on the Tell el 'Ajjul scarabs. However this motif was later found from another workshop in Egypt (Tell el Dubia), and the el Khokha scarabs are most similar to this form.

Beth Shan is a Levantine site which was conquered in the 18th Dynasty - the town was annexed and the Egyptians set up a garrison there. It had a prolific faience workshop which made a lot of the smaller finds at Beth Shan (the bigger and better pieces were imported from Egypt). The inscriptions on the bases of these scarabs are reversed - for instance Amenhotep III's name is written left to right rather than right to left as it would be on an Egyptian article. This suggests they're cheap knock-offs - the maker has created a mould by copying an original example and used this to produce almost look-a-likes of originals.

Boonstra now moved on to some examples of workshops later than the scope of her PhD (which was early 18th Dynasty), to give us a flavour of later developments. Her first example in this section was Amarna. There has been little work on scarab production at the site, but there are indications that scarabs were made there. One of these pieces of evidence is a limestone mould which might be for metal scarabs, and another is that Anna Hodgkinson (who works there) has found a mould for faience scarabs and later a scarab that fits in the mould!

Memphis has an example of a case where the actual site of the workshop has been found. Petrie excavated the shrine built by Merenptah in the temple of Ptah at Memphis in 1909. Under the outer court of this 19th Dynasty shrine is the remains of a scarab workshop with many broken and unfinished steatite scarabs. The date of this workshop isn't clear - although it definitely pre-dates the temple it is underneath.

The final example was a Late Period scarab factory at Naukratis, in the Delta - another example where the actual site of the workshop is known. The faience scarabs that were mass produced here came in several types and were widely exported, including throughout the Aegean. Tying back to some of her introductory remarks about the difficulties of dating scarabs by their inscriptions Boonstra told us that one of the types produced here in the Late Period has the name of Thutmose III on it, who lived around a millennium before these scarabs were produced!

Boonstra finished by summing up what the Second Intermediate Period and early New Kingdom scarabs can tell us about the politics of the eras. For instance in the Second Intermediate Period the distribution of scarabs shows the connection between the Levant and Nubia which didn't involve Egypt. And in the New Kingdom examples scarabs with Hatshepsut's name on disappear after her reign but the style she brought in (which ignored the Second Intermediate Period and looked back to the Middle Kingdom) is retained.

This was a fascinating talk - lots of information both on the practicalities of scarab production (I had no idea that steatite started soft and was then fired to produce the hard stone), and on what these little objects tell us about grand themes of history like politics or trade. I also liked the demonstration that people are the same regardless of time period - cheap knock-off versions of scarabs then, and handbags now!