Life Cycle of an Object

EC146 – A Wooden Canopic Jar Lid

CLE214
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by Victoria Greenwood
Description

EC146 is a wooden canopic jar lid in the shape of the animal head of Hapi, one of the Four Sons of Horus. The wood was covered in gesso before being painted, however now only small traces remain of the colours. The object has sustained some damage, with a large crack running from the base to below the left eye.1 Its previous accession number 963 is stuck to the back of the object.2 The object came to the Egypt Centre as an assumed loan from the Wellcome Trusties on the 15th of February 1971.3 The inner and outer ring on the base of the lid4 give an idea of how thick the jar itself was. This also gives an indication that it was made separately from the jar itself, unlike some dummy jars5 where the lid is carved from the same piece of material as the jar itself.6

It is unclear when this object was made, however, since the popularity of the Sons of Horus in animal form became more prominent during the Ramesside period and continues on into the Late Period. It is because of this that it is likely that EC146 dates from this extensive time frame.7 The materials used in the 19th Dynasty to create canopic jars also support this, as pottery and wood became used with a higher frequency than limestone or calcite.8 It is unlikely to have come from the Middle Kingdom or Early New Kingdom as canopic jars from this period have solely human heads.9 It is also possible that it was part of a dummy canopic jar, and so was never used to contain human remains. If this were the case, then EC146 would likely date from the 21st to the 26th Dynasty, although the later jars were often

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1See Fig. 1.
2See Fig. 2.
3EC146 Swansea Egypt Centre Object File.
4See Figs. 3 and 4.
5See Fig 5 and 6.
6Taylor, 2001, 73.
7See Figs. 7-16a-d; Cassirer, 1955, Fig. 1.
9See Figs. 17-25.
made out of calcite rather than wood.\textsuperscript{10} However the probability of it being produced after the Persian Period are very slim, as the use of canopic jars ceases during the Ptolemaic and Roman Periods.\textsuperscript{11}

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\textbf{Materials}

EC146 is carved from wood and coated with a thick layer of gypsum followed by a layer of gesso and finished with painted decoration. Canopic jar lids made of both sycamore and acacia have been discovered from the relevant time period, so it is possible the woods could be native.\textsuperscript{12} As it is an organic substance radiocarbon dating could be used to narrow down the date of manufacture. However as this is not always reliable, another tool could be dendrochronology, but this would require knowing the specific wood EC146 is made from.\textsuperscript{13} Due to the difficult nature of identifying ancient woods without further scientific analysis it would be impossible to tell the exact species of tree the wood came from at this current time, so it could in fact be of foreign and imported in origin rather than native wood.

The sycamore tree, although it no longer grows in Egypt, thrived along the Nile Valley where it was highly valued. It flourished due to a symbiotic relationship with the \textit{ceratosolen} wasp.\textsuperscript{14} Archaeological remains of the sycamore have been found at Saqqara.\textsuperscript{15} Both acacia

\textsuperscript{10}Taylor, 2001, 73-75.
\textsuperscript{11}Ikram, 2003, 128.
\textsuperscript{12}See Figs. 6 and 7
\textsuperscript{13}http://web.mesacc.edu/dept/d10/asb/archaeology/dating/datingtech.html#Radiocarbon
\textsuperscript{14}Zohary and Hopf, 1988, 146. This relationship can still be seen today in the Sudan.
and sycamore wood was used to create a variety of items such as furniture and coffins, and wood was used throughout Egypt in architecture. Although both the acacia and the sycamore tree were native to Egypt the two varied in quality. Acacia wood was of a higher quality but was limited in the amount of timber the tree produced, unlike the sycamore tree which produced a large amount of lower quality timber. Sycamore was also available from the Levant, so if EC146 was made from sycamore it could easily be imported rather than native sycamore wood.

All native trees in Ancient Egypt were viewed as sacred, something which carried on through to the 20th century. The trees were sacred to different deities depending on the nomarch, but in general the sycamore tree was connected to Isis and Hathor as it was seen as a safe harbour, while the acacia tree was linked to both Horus and Saosis. As well as being linked to these gods the acacia tree also had a use within mummification: its resin was used to bind the bandages.

Gypsum (hydrated calcium sulphate) occurs naturally in Egypt in rock or crystal form, and was ground down into a thick plaster and used to cover the grain of the wood or any exposed defects. As well as smaller objects such as EC146, gypsum was also used in larger building works to cover uneven surfaces. The quarries in Umm es-Sawan, had workshops present

15 Zohary and Hopf, 1988, 189.
17 Lucas and Harris, 1960, 79.
20 Meiggs, 1982, 71.
21 Hornblower, 1930, 17; Blackman, 1925, 56.
22 Buhl, 1947, 80.
24 Killen, 1994, 16. The earliest known use of gypsum within Ancient Egypt was to repair a pre-dynastic pottery vessel. Lucas and Harris, 1962,6.
26 Bloxam and Heldal, 2007, Fig. 1; See Figs. 26a and 26b.
at the site to work with the material and by the Old Kingdom it had become a key material and quarrying was intensive, with Umm es-Sawan being the richest deposit.\textsuperscript{27}

The flecks of blue paint remaining on the surface of the artefact indicate that the lid was originally painted, and other examples that have been found agree with this deduction.\textsuperscript{28} The principal blue pigment used in ancient Egypt is referred to as Egyptian Blue.\textsuperscript{29} Egyptian Blue is a synthetic pigment that has been found on objects from the 4th Dynasty onwards, made by heating filings of copper or a copper ore, silica, lime (calcium oxide) and an alkali such as natron or potash together to produce a crystalline product that can be reground and mixed with a binding medium to form paint.\textsuperscript{30}

Another possibility is that the paint used was Cobalt Blue, a pigment attested in Egypt during the Amarna Period. This pigment could come from either the Kharga Oasis or from Europe, through the trading network made available through the rise in trade with the Aegean during the reigns of Akhenaten and Amenhotep III in the late Eighteenth Dynasty. This network would provide a supply of cobalt that could have been used to create paint.\textsuperscript{31}

Production

It is impossible to tell who made the object, where, when and how the object was made simply by looking at EC146. However they can be discovered, at least partially, by using material evidence and knowledge of the ancient Egyptian culture. Scenes found in tombs depicting carpentry reveal the processes of woodworking, such as in the tombs of Nebamun

\textsuperscript{27}Bloxam and Heldal, 2007, 312.
\textsuperscript{28}See Fig. 9, 13, 16a-d, 20, 21, 24, 25.
\textsuperscript{29}Lee and Steven, 1999, 108.
\textsuperscript{30}Lee and Steven, 1999, 109.
\textsuperscript{31}Lee and Steven, 1999, 111.
and Ipuki TT181, Rekh-mi-re TT100 and Ti at Saqqara. Other objects that reveal woodworking processes are tomb models of carpentry shops, like the one found in the 11th Dynasty tomb of Meketre at Thebes.

During the Middle Kingdom bronze tools gradually replaced the copper tools of the Old Kingdom. By the time of the New Kingdom only bronze tools were used which greatly improved the quality of wooden products in Egypt as the bronze blades were harder, and so retained a sharper cutting edge for longer. Although early evidence of iron working has been found in Egypt, it is unlikely to have been common enough during the New Kingdom to be used as tools. There is evidence of iron given as presents from King to King, such as a dagger given to Tutankhamun by a Hittite ruler. Although it was in common use by their neighbours Egyptians were slower to adopt iron working, making it highly unlikely that EC146 would have been made with iron tools. The tools carpenters used are known both from artistic depictions and physical examples that have been discovered, which depict a wide range of tools available to Egyptian carpenters including: axes, adzes, saws, bow-drills, chisels, mallets, lathes and awls.

Suitable trees would have been felled and cut into manageable logs and the wood would then have been transported to a carpenter’s workshop. It was essential that the raw wood was converted to dry and usable timber quickly to prevent defects developing in the wood. Such a defect would be the “shakes”, where the timber would split and holes would open radially.

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32See Fig. 27.
33Wild, 1966, plate CLXXIY.
34Killen, 1994, 46.
35Killen, 1994, 41; James, 1961, 37; Cline, 1948, 14.
36Shaw, 2012, 125-126. The iron used in early Egyptian workings is thought to be of meteoric origin however the lack of nickel content within the iron has called this theory into question.
37Shaw, 2012, Fig 1.7.
38Killen, 1994, 43; James, 1961, 36.
around growth rings or along the centre. This is one possible cause of the crack in EC146, as the defect follows the grain of the wood and then the growth rings visible on the base of the object. The layer of gypsum and gesso inside the crack indicate that the defect was present when the lid was carved and the creator used the plaster to attempt to cover the damage.

Carpenters would use a handsaw to reduce the logs or planks of wood to the size they required, and then a vice would keep the beam they were working on in place before the carpenter would cut downwards from the top of the wood. Rough modelling would have been done using an axe and adze, and a socket drill would have been used for smaller holes. To carve the carpenter would have used a chisel and when the final shape of the object was created it would be polished and softened using a hard, coarse stone, most likely sandstone. The Egyptians also used steam-bending to shape wood, however it is unlikely that this technique was used on EC146 as it appears to have been used primarily to bend bows rather than sculpted items.

Evidence from the painted scenes of carpenters at work on tombs such as TT181 and TT100 implies that all the carpenters in ancient Egypt were men. It is very probable that EC146 was made in a carpenter’s workshop by a professional, as they would have access to all the resources and tools required. A fairly large space would also have been needed to produce wooden pieces; a space for the vice that held the wood in place, a place to mix the gesso and paint and a place where the object would have been painted. A non-professional would have lacked the space, ability and tools to create EC146.

41 See Fig. 28.
42 David, 2003, online History Database.
43 Shaw, 2012, Fig. 7.6.
It is more than likely that EC146 was made in Egypt as there is no archaeological evidence suggesting that any nation other than the Egyptians made canopic jars. Archaeologists use dendrochronology (tree-ring dating) to date wooden finds and without this method, no certain date can be attested to the object, however there are limitations to how successful it can be.\(^{44}\)

It is possible that EC146 is not from before the New Kingdom as it was only in the 19th Dynasty onwards that canopic jar lids took the shape of the animal headed versions of the four sons of Horus. Before this time the lids were human headed representations of the four sons\(^{45}\) or in some cases intended to resemble the deceased.\(^{46}\) The time period which this lid may have belonged to cannot be narrowed down further without the use of scientific analysis, as even though by the 21st Dynasty canopic jars no longer housed the removed organs, they were still placed in many tombs of the elite.\(^{47}\) These jars that didn’t hold the viscera were termed "dummy jars" and without the actual jar this lid belonged to or chemical testing, it impossible to tell if the jar ever contained human lungs.

**Use/Function**

EC146 was used as a lid for a jar used to hold internal organs placed there during the mummification process. As the lid is in the shape of the animal head of Hapi, it is most likely that its corresponding jar held the lungs as Hapi is most commonly considered the protector of those organs.\(^{48}\) It was by the Middle Kingdom that in elite burials four canopic jars became the norm, but now with human headed shaped lids, rather than the disk shape of the of the Old Kingdom.\(^{49}\) The use of four jars is believed to represent the four points of the cosmos,

\(^{44}\)http://web.mesacc.edu/dept/d10/asb/archaeology/dating/datingtech.html#Dendrochronology
\(^{45}\)Grajetzki, 2003, 47.
\(^{47}\)Dodson, 2001, 234.
\(^{49}\)Taylor, 2001, 67. The disk shaped lids of the Old Kingdom were still used however.
while the coffin is modelled on how the universe was supposedly shaped.\textsuperscript{50} Although the depictions varied initially by the 12\textsuperscript{th} Dynasty the lids represented the Sons of Horus in their human headed form. Three of the figures are bearded, and the fourth is thought to represent Imsety, who later became male rather than female.\textsuperscript{51}

By the 19\textsuperscript{th} Dynasty however they were identified with their animal heads. Hapi became a baboon, Duamutef a jackal and Qebehsenuef a falcon, whilst Imsety remained in human form.\textsuperscript{52} Each Son looked after specific organs, however as time progresses these change. For example older texts have Hapi with the head of a dog guarding the intestines rather than the lungs which are commonly associated with him.\textsuperscript{53} It is possible that the corresponding jar was never used to hold any internal organs and was instead a dummy jar; however there is no way of knowing if this is the case for EC146 unless it can be matched with the correct jar. Dummy jars were used in the Third Intermediate Period as a way to adhere to the old ways, but the focus had shifted from preservation of the body to restoring it to its prime form.\textsuperscript{54} The Four Sons of Horus appear on coffins as well as the stoppers for canopic jars and are most often associated with four goddesses of protection; Isis with Imsety, Neith with Duamutef, Serqet with Qebehsenuef and Nephtys with Hapi.\textsuperscript{55}

Hapi as well as the other Four Sons were also shown on coffins,\textsuperscript{56} as well as in funerary texts. In Hunefer’s Book of the Dead from the 19\textsuperscript{th} Dynasty, Hapi is shown attending the weighing of the heart,\textsuperscript{57} and as a “sovereign prince” of Re.\textsuperscript{58} Other examples include the Four Sons

\textsuperscript{50}Raven, 2005, 38-41.
\textsuperscript{51}Taylor, 2001, 68.
\textsuperscript{52}Pinch, 2002,204.
\textsuperscript{53}Stevenson, 1909, 69; Lesley, 1868, 571.
\textsuperscript{54}Ikram, 2003, 68.
\textsuperscript{55}Pinch, 2002, 204; Taylor, 2001, Fig. 43; Ikram, 2003, 37-38.
\textsuperscript{56}Spencer, 1982, 182.
\textsuperscript{57}Rossiter, 1979, 83.
\textsuperscript{58}Rossiter, 1979, 87.
being protectors of Osiris in Pyramid Texts, part of the souls of Nekhen in obscure Coffin Texts and as four of the seven stars who help Anubis hide Osiris from the New Kingdom onwards.\(^{59}\) As canopic jars were used in mummification it is highly likely that EC146 would have been placed in a tomb where others have been found. However this may not be the case if the deceased’s tomb had been robbed and EC146 stolen.

The original owner of EC146 had to have been able to afford the mummification process as well as burial goods. During the New Kingdom under Ramses II if became the fashion that only objects produced specifically for tombs were buried, and so many tombs belonging to poorer people have no burial goods.\(^{60}\) Twenty-three per cent of excavated tombs fall into this category.\(^{61}\) If an object is not inscribed and found outside of a tomb or been the victim of looting then identifying the original owner becomes highly difficult. By the Ramesside period there were three main burial items; shabtis, jewellery and coffins, with hardly any objects relating to daily life included.\(^{62}\) During the Third Intermediate Period more canopic jars have been found in the tombs of officials.\(^{63}\) It is likely then that if EC146 does date from the Ramesside period into the Third Intermediate Period, whether as part of a dummy jar or not, that it would belong to someone who could afford at least some burial goods.

**Transformation & Reuse**

EC146, after being used to store lungs, would have then been put in a tomb and sealed away. The ideology behind this is so that the body stays safe and preserved however looting, both modern and ancient, meant that this was an ideological dream. This is especially true during

\(^{59}\)Pinch, 2002, 204.  
\(^{60}\)Grajetzki, 2003, 66.  
\(^{61}\)Grajetzki, 2003, 74.  
\(^{62}\)Grajetzki, 2003, 89-90.  
\(^{63}\)Grajetzki, 2003, 98.
the late Ramesside Period where many robberies occurred in Thebes during civil unrest, so it is possible that if EC146 originated from Thebes during this period it may have been looted. However as the object was cracked during production it is entirely possible that it was never used to store lungs and was disposed of as rubbish.

It is not possible to tell if EC146 was reused as a lid for a canopic jar as only the lid remains and not the corresponding jar. However it is known that after becoming part of the Wellcome collection and arriving in Swansea in 1971 it was then put into temporary storage, along with another wooden canopic jar lid depicting Imsety. Its most recent transformation is to that as a tool for education and display within the Egypt Centre.

**Deposition**

The end use of EC146 was likely to have been planned, unless as stated before it became useless due to damage. As a canopic jar lid EC146 had a high probability of being placed in a tomb, as shown by other examples of canopic lids and jars that have been found. EC146 has not remained intact as it is missing the jar. Whether it was found like this is unknown at the current time.

**Rediscovery**

It was most likely discovered through excavations in a cemetery that boasts tombs from the Ramesside Period onwards. This includes tombs at Thebes, Giza, Abydos and Aswan, as well as Medinet Habu, if the original owner of EC146 was a priest or priestess. There is also the possibility that the original owner may not have been human, as canopic jars have

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64 Van Dijk, 2000, 308.
65 See Fig. 1.
66 Egypt Centre MODES catalogue EC146; Egypt Centre MODES catalogue EC149; See Fig. 29. They were stored in Room 8, Box 178.
67 Kemp, 2006, 56.
68 Kemp, 2006, 352.
been found belonging to the Apis Bull.\(^{69}\) However if it was found elsewhere it may have been an accident, but without the find-spot or excavation report it is unsure at this time. It is also unknown how EC146 came into the country; however as it is part of the Wellcome collection it was likely bought either from auction or as part of Wellcome’s share of the finds for sponsoring excavations in Egypt\(^{70}\). It is currently unknown who was involved in the rediscovery of EC146, but based on its presence within the Wellcome collection it is possible that Sir Henry Wellcome may have sponsored the excavation that found it, especially if its origin was at Jebel Moya.\(^{71}\)

EC146 has been transformed from its original state as part of an object for mummification to that of a museum piece. As such it has been numbered twice, once on the back of the piece\(^{72}\) for the original accession number, and twice on the bottom of the piece inside the inner ring.\(^{73}\) EC146 has also sustained some damage from when it was made initially. The paint that initially covered the object has worn away, until only flecks of colour and white gesso remain.\(^{74}\) As well as this, both the snout and the left ear have also been chipped\(^{75}\) as well as the long crack down the front of the object.\(^{76}\) Drawings made of the object in 2005\(^{77}\) show the same damage present then as well as today. The last time it was audited was in 2007.\(^{78}\) In normal conditions wood breaks down quickly, however in dry conditions such as rock cut and sandy tombs this process is halted and can preserve the object.\(^{79}\) It is because of this that it is important that EC146 is kept in a controlled environment to prevent the wood from

\(^{69}\)Ikram, 2003, 85.
\(^{70}\)Robert Rhodes, 2006.
\(^{71}\)Robert Rhodes, 2006.
\(^{72}\)See Fig. 2.
\(^{73}\)See Fig. 4.
\(^{74}\)See Fig. 2 and 30.
\(^{75}\)See Fig. 31.
\(^{76}\)See Fig. 32.
\(^{77}\)Egypt Centre Object File EC146.
\(^{78}\)Egypt Centre MODES catalogue EC146.
\(^{79}\)Blanchette, Haight, Koestler, Hatchfield and Arnold. 1994, 55.
rotting away. When EC149 was sent to Cardiff for conservation work it was recommended that it be kept in a controlled area of 40-55% humidity.\textsuperscript{80} However observation of this damage can provide insight into how to better conserve wooden artefacts.\textsuperscript{81}

There are several scientific tests that could be performed on EC146 with various benefits and drawbacks. The first possibility is the use of radiocarbon dating which can only be used on organic material, however whilst this would give a good place to start using relative dating techniques, there is a 95% chance that the object is within \pm 2 Standard Deviations of the initial result.\textsuperscript{82} To get that initial result a sample of the object would have to be removed, the larger the better since material is lost during the process.\textsuperscript{83} This sample would then be under the threat of contamination throughout the entire analysis, and if the sample was contaminated it would render the result obsolete.\textsuperscript{84} However although a moderately sizable sample is required for C14\textsuperscript{85} dating, a newer technology called Accelerator Mass Spectrometry requires only a small piece as it physically counts the C14 atoms rather than working it the age based on C14’s half-life.\textsuperscript{86} Another limitation of radiocarbon dating is that the assumptions upon which it was based have since been proven wrong, however in working together with dendrochronology C14 can still produce useful information.\textsuperscript{87} Dendrochronology would be highly useful in determining the time period in which EC146 was made by measuring the tree rings; however this would only be possible if the species of tree used to carve EC146 and the region from which it came was known.\textsuperscript{88}

\textsuperscript{80}Egypt Centre Object File EC149.
\textsuperscript{81}Blanchette, Haight, Koestler, Hatchfield and Arnold. 1994, 69.
\textsuperscript{82}Goffer, 1980, 304.
\textsuperscript{83}Goffer, 1980, Table 17.1.
\textsuperscript{84}See Fig. 33.
\textsuperscript{85}http://web.mesacc.edu/dept/d10/ash/archaeology/dating/datingtech.html#Radiocarbon
\textsuperscript{86}http://web.mesacc.edu/dept/d10/ash/archaeology/dating/datingtech.html#Radiocarbon; Bahn, 1996,22.
\textsuperscript{87}Bahn, 1996,22. The assumption that the amount of carbon remains the same in the atmosphere is the basis for C14 dating. However it has since been proved the amount of radiation fluctuates depending on the changes within Earth’s magnetic field.
\textsuperscript{88}http://web.mesacc.edu/dept/d10/ash/archaeology/dating/datingtech.html#Dendrochronology.
both are known it can also be used to measure climate changes by using the thickness of the rings themselves.\(^9^9\) These methods of absolute dating combined with methods of relative dating such as typology and stratigraphy would help solve how old EC146 really is rather than speculation based on the shape of the object. A method that would not work however is potassium argon dating as it is designed to date rock up to 4 billion years old.\(^9^0\)

**Reinterpretation and Current Reuse**

Whilst the specifics are unknown, it came to the Egypt Centre via the Wellcome collection in 1971 and is currently on display in the Egypt Centre in Swansea.\(^9^1\) As EC146 was included, presumably, in its original owner’s funerary goods there are some ethical implications about its display. Is it ethical to display the sacred in a museum? This is a debate that has spanned years, but the purpose of education and study objects like EC146 are displayed for the public and captures the imaginations of children in the hopes of furthering the field of Egyptology. Another consideration is the possibility of looting. Since it came to the Egypt Centre in 1971 through the Wellcome collection it is certain that it was not looted from Egypt after the UNESCO convention of 1970 which saw the drafting of laws on “Prohibiting and Preventing the Illicit Import, Export and Transfer of Cultural Property.”\(^9^2\) However how it came to be in the Wellcome collection is currently unknown.

The display of objects within museums influences how they are seen by the public and can also be influenced by our own prejudices. For example this Middle Kingdom mirror\(^9^3\) could be displayed in several ways. It could pander to museum’s gender bias and be displayed in a show of Egyptian femininity. An alternative would be that it could follow the school of Post-

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\(^9^0\) http://web.mesacc.edu/dept/d10/asb/archaeology/dating/datingtech.html\#Potassium-Argon.
\(^9^1\) Egypt Centre Swansea Object File EC146
\(^9^2\) http://www.unesco.org.uk/convention_on_prohibiting_and_preventing_the_illicit_import,_export_and_transf
\(^9^3\) r_of_cultural_property_(1970).
\(^9^4\) See Fig. 34.
Processual Archaeology and be used as an example of religion and culture. \(^9\) Just like the mirror, EC146 could be displayed under a variety of themes, the most obvious being burial goods or religion. However it can also be displayed under wood working and carpentry, moving the focus from the divine to the ordinary. In the Egypt Centre it is currently displayed with other wooden objects in a case designed to show the different technologies the Egyptians used in regards to wood. All the objects within the case show some damage, however the room is kept at a constant temperature and light to a minimum in order to prevent further degradation of wood. The case itself is also carefully monitored and controlled. Although it is placed with wooden objects currently, EC146 could also be displayed on a different floor as it is a funerary object and so would match the theme of the downstairs display area.

**Conclusion**

EC146 is a wooden canopic jar head in the shape of Hapi of indeterminate age and origin, although estimates can be given based on other finds. However with scientific analysis it may be possible to determine how old EC146 is and what species of tree it was made from. It is currently held in the Swansea Egypt Centre as a tool to educate the public about wood production in Ancient Egypt.

Word Count: 3862

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\(^9\)Bahn, 1996, 71.
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Fig. 24 – Egyptian Museum in Cairo Accession Number JE60687. Picture courtesy of The Illustrated Guide to the Egyptian Museum in Cairo.

Fig. 25 – Egyptian Museum in Cairo Accession Number JE46774. Picture courtesy of The Illustrated Guide to the Egyptian Museum in Cairo.

Fig. 26a – Map of Egyptian Quarries. Picture Courtesy of http://pers-storemyr.net/2011/01/23/ancient-egyptian-quarries-a-literature-update-2007-2010/.

Fig. 26b – Map of area around Umm es-Sawan. Picture Courtesy of http://pers-storemyr.net/2011/01/23/ancient-egyptian-quarries-a-literature-update-2007-2010/.
Fig. 27 – Woodworking scene from tomb of Nebamun and Ipuki (The Yorck Project: 10.000 Meisterwerke der Malerei. DVD-ROM, 2002. ISBN 3936122202. Distributed by DIRECTMEDIA Publishing GmbH)

Fig. 28 – British Museum Catalogue, Registration Number 1891,0509.8. Picture courtesy of British Museum.

Fig. 29 – EC149. Picture courtesy of the Egypt Centre, Swansea.

Fig. 30 – EC146 facing left. Picture by Author.

Fig. 31 – Frontal view of EC146 showing damage to ear and snout. Picture by Author.

Fig. 32 – Distance view of EC146 showing size of crack. Picture by Author.

Fig. 33 – C14 atom. Picture courtesy of http://web.mesacc.edu/dept/d10/asb/archaeology/dating/datingtech.html#Radiocarbon [Accessed 03/12/2012 21.33]

Fig. 34 – British Museum Catalogue, Registration Number EA 2731. Picture courtesy of British Museum.
Figures

Fig. 1 – Side view of EC146 showing the crack on its left side.

Fig. 2 – Showing the previous Accession Number as well as paint marks.

Fig. 3 – EC146 on its side showing the inner and outer rings on the bottom.
Fig. 4 – Frontal view of the inner and outer rings as well as the current Accession Number.

Fig. 5 – British Museum Catalogue Object Registration Number .37936. Dummy canopic jar with head of Qebehsenuef.

Fig. 6 – British Museum Catalogue Object Registration Number .37956. Dummy canopic jar made of sycamore.
Fig. 7 – British Museum Catalogue Object Registration Number .9607. Canopic jar lid made of acacia.

Fig. 8 – British Museum Catalogue Object Registration Number OC.1055. Painted canopic jar lid.

Fig. 9 – British Museum Catalogue Object Registration Number 1891,0426.26. Canopic jar with paint and gesso.

Fig. 10 – British Museum Catalogue Object Registration Number .9532. Wooden canopic jar lid with pottery jar.
Fig. 11 – British Museum Catalogue Object Registration Number .9533. Painted wooden canopic jar lid.

Fig. 12 – British Museum Catalogue Object Registration Number .9534. Painted wooden head of Hapi with a pottery canopic jar.

Fig. 13 – British Museum Catalogue Object Registration Number 1929,0209.6. Calcite canopic jars from the 21st Dynasty.

Fig. 14 – Museum of Fine Arts, Boston, Accession Number 72.4169. Wooden canopic jar lid in the shape of Hapi from the 25th Dynasty.
Fig. 15 – Museum of Fine Arts, Boston, Accession Number 72.4360. Wooden canopic jar lid in the shape of Imsety from the 26th Dynasty.

Fig. 16a – Egyptian Museum in Cairo Accession Number JE85915. Canopic jar from Psusennes I - Duamutef.

Fig. 16b – Egyptian Museum in Cairo Accession Number JE85917. Canopic jar from Psusennes I – Hapi.
Fig. 16c – Egyptian Museum in Cairo Accession Number JE85916. Canopic jar from Psusennes I - Qebehsenuef

Fig. 16d – Egyptian Museum in Cairo Accession Number JE85914. Canopic jar from Psusennes I - Imsety.

Fig. 17 – British Museum Catalogue Object Registration Number 1901,0415.25. Calcite canopic jar with wooden lid.
Fig. 18 – British Museum Catalogue Object Registration Number 1901,0415.26. Calcite jar with wooden lid.

Fig. 19 – British Museum Catalogue Object Registration Number .9605. Wooden canopic jar lid.

Fig. 20 – British Museum Catalogue Object Registration Number 1907,1015.3. 11th Dynasty wooden canopic jar lid.

Fig. 21 – British Museum Catalogue Object Registration Number 1899,0708.165. 12th Dynasty wooden canopic jars with canopic chest.

Fig. 22 – National Museum of Ireland Inventory Number 1913:332. 12th Dynasty wooden canopic jar lid.
Fig. 23 – Egyptian Museum in Cairo Accession Number JE39637. Amarna Period canopic jar.

Fig. 24 – Egyptian Museum in Cairo Accession Number JE60687. Tutankhamun’s canopic jars.

Fig. 25 – Egyptian Museum in Cairo Accession Number JE46774. Canopic jars of Inepuhotep, 12th Dynasty.
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Fig. 26b – Map of area around Umm es-Sawan.

Fig. 27 – Woodworking scene from tomb of Nebamun and Ipuki.

Fig. 28 – British Museum Catalogue, Registration Number 1891,0509.8. New Kingdom adze from the tomb of Ani

Fig. 29 – EC149, a human shaped wooden jar lid.
Fig. 30 – EC146 facing left showing damage to ear and snout.

Fig. 31 – Frontal view of EC146 showing damage to ear and snout.

Fig. 32 – Distance view of EC146 showing size of crack.

Fig. 33 – C14 atom.

Fig. 34 – British Museum Catalogue, Registration Number EA 2731. Middle Kingdom bronze mirror with Hathor carved into the handle. The falcons could possibly be a representation of Ra.
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