

Golden Mummies of Egypt

Audio guide

3. Glass lens

00:00:00 Dr Campbell Price

This is a small round piece of glass with a diameter of 5.3 centimetres. The glass, or lens, is convex in shape and completely clear.

00:00:10 Greg Jenner

Yeah. So, this one is really interesting because it's not a big shiny statue or a beautiful mummy's coffin, or... It doesn't even look very noticeable. I mean, it's five centimetres across, it's not much bigger than a coin. But you really like this, don't you, Campbell? This is something you're into.

00:00:31 Campbell

That this is one of my favourite pieces in the whole collection from Egypt and Sudan in Manchester Museum, of which we have 18,000 items. Because, yeah, there's quite a lot of Egyptian and Sudanese antiquities in the in the Manchester Museum, and out of all of those, to me, this is the most surprising. As you say, it's not gold, it's not massive, it's not stone. But imagine using this because, Greg, this comes from a time before clear glass was a thing. Now, if you wear glasses, as I do, you're used to, you know, having spectacles. This is something which is like a forerunner of spectacles, glasses, because it shows the Egyptians of this time, so 2,000 years ago, Egypt ruled by the Roman Empire, that shows those people were aware of the properties of light and how light could be manipulated and refracted through certain shapes of glass.

00:01:40 Greg

Yeah, because spectacles are medieval. So, I'm a medieval historian, I know spectacles were invented in the 1200s.

00:01:46 Campbell

I'm so glad you know that. I have no idea. So, where do they appear? The 1200s. Wow.

00:10:51 Greg

And people, they're already using eyeglasses earlier than that, actually, you know, a single eyeglass to read. You know, monks are using them to read very small handwriting, you know, in dark rooms.

So, the obvious question. Do we think this was a magnifying glass for reading? For looking at demotic scripts and hieroglyphs, and the things we've talked about? Or do we think this is for something else?

00:02:17 Campbell

Well, the excavator who led the Egyptian archaeologists who excavated these objects was called William Matthew Flinders Petrie.

00:02:27 Greg

Ooh, he was famous. I've heard of him.

00:02:30 Campbell

Flinders Petrie, he's quite a big name in in Egyptian archaeology. And in the nineteenth century when that team was working at the site of Hawara, a very important Graeco-Roman site, southwest of modern Cairo, in the 1890s, they found this piece amongst, you guessed it, lots of papyrus with lots of documents. And so, I would agree with you, you could use it like a, you know, like you would use today, a magnifying glass just to kind of look at a letter, especially if your sight is not so good. But Flinders Petrie had an idea that it could be used as a bullseye lens, so the shape of it, if you hold it up to strong light, like the Egyptian sun, you could focus the light, in such a way that would make the spot it landed on really hot and bright so you could start a fire with it. So, it may have a practical dimension. You know, how do you start fires? You don't have lighters.

00:03:33 Greg

So, if you want to cook your dinner, you don't want to, yeah, you want to cook your dinner, you've got to, you know, you've got to make, you got to cook for the family. How do you start your fire? Maybe with this little glass lens that takes the sun's rays and directs it into the orbit of whatever you're burning, a bit of wood, bit of animal manure that's dried up, and then suddenly, sparks, flames, dinner! Yeah!

00:03:57 Campbell

What's cooking in the kitchen? But the thing that really blows my mind about this is, it is a beautiful and very finely produced thing. And nowadays we're used to clear glass, but in Roman Egypt, clear glass would be something of a novelty. And if, as you say, you know, spectacles aren't really widely used till, god, twelfth century medieval Europe, it shows that people still understood the properties of glass over 1,000 years earlier, which is just mad.

00:04:31 Greg

Because glass is made of sand, basically, isn't it? I mean, and Egypt is full of sand. You got, there's no problem with sand! So, whether they discover it by accident, maybe some sand gets melted by the hot sun and they go, hang on a second, this is fun, or whether they're trying to develop something. But what's nice about it is it's perfectly spherical, isn't it? It looks like it's been polished, like someone has sat there for a long time trying to make it a really specific shape, so it's nice to sit in the hand, but also maybe so it does a job. I mean, it looks like a paperweight, but I'm guessing it's a lot more practical than a paper weight, because you wouldn't spend so much time whittling away on something as pointless as that. This is beautifully made.

00:05:14 Campbell

We know that the ancient Egyptians knew glass from well over a thousand years before this. They have coloured glass in rods which you can heat up and make into really nice patterns. So, they make, you know, vessels – really beautiful vessels – for perfume made of glass. But clear glass, the kind of glass that you could use for a magnifying device, that is something that really only pops up much later in the Graeco-Roman Period.

00:05:43 Greg

Yeah, so this is what 2,000 years old, give or take? Which is the Roman Period that is the time where Julius Caesar sort of storms into Egypt, and you end up eventually with his heir Augustus, Octavian becoming Augustus, conquering it, and Egypt becomes a Roman province. So, this glass object is from a time where the Roman Empire expands and the Egyptian empire, well, the Egyptian world ends. Really.

00:06:10 Campbell

Yeah, the Egyptian pharaohs, I mean, if we count Cleopatra VII as the last pharaoh, that is subsumed, then, and as you say, the Roman Empire, and the Roman emperor himself says he's the pharaoh, and he's depicted on temple walls in Egypt, doing pharaoh-like things. But yes, Egypt is then part of a much wider international network.

00:06:35 Greg

So, there we go. This beautiful little thing that looks so anonymous and so dainty comes from a time of huge change in Egyptian society. It's the end of Egypt that's been around for 3,000 years. And this little piece of technology is cutting edge, but coming at time of chaos and uncertainty, probably. So, it's actually rather special, isn't it?

00:06:59 Campbell

Yeah, chaos, uncertainty and a lot of paperwork. The ancient Egyptians loved those papyrus documents, and we've got lots of them from the site. This piece was found at Hawara. So, I suspect

the administration of the Roman province of Egypt would have required objects like this to help you read the latest edict from the emperor.

00:07:22 Greg

Ah, there we go then. Alright. So not so small and dainty. It's actually very important! You've convinced me!