# File name: BM podcast\_6 X-rays and pioneering women.mp3

**Moderator questions in Bold,** Respondents in Regular text.

KEY: **Unable to decipher** = (inaudible + timecode), **Phonetic spelling** (ph) + timecode), **Missed word** = (mw + timecode), **Talking over each other** = (talking over each other + timecode).

(TC: 00:00:00)

Hugo Chapman: Welcome to the BM podcast. We've reached September, that period when we're feeling a little bit, sort of, I don't know, the summer holidays are over and we're gearing up for the new period of work. Is that right, Sushma?

(TC: 00:00:13)

Sushma Jansari: I think so. And also, we're gearing up for the cold and the rain, although we've had plenty of that during the summer anyway, haven't we?

(TC: 00:00:19)

Hugo Chapman: That's rather negative, I have to say.

(TC: 00:00:22)

Sushma Jansari: I shouldn't really say that, given that the sun is shining right now and it's a really lovely day, but yes.

(TC: 00:00:29)

Hugo Chapman: Anyway, if you have September blues, the BM podcast is here to cheer you up, we've got a very, very full episode this month, an object of the month.

(TC: 00:00:38)

Sushma Jansari: A mystery object of the month.

(TC: 00:00:39)

Hugo Chapman: A mystery object, yes. And then Francesca Hillier is speaking to Sian about a rare case of the British Museum being enlightened about employing women, which I think we'd all applaud.

(TC: 00:00:52)

Sushma Jansari: Absolutely, I certainly would. And I think they also talk about the so-called 'modesty boards' being installed in the Round Reading Room.

(TC: 00:00:59)

Hugo Chapman: Yes, we've got to know more about those modesty boards. And then you and I, we disappeared deep into the bowels of the earth to find Dan O'Flynn in his specially-padded X-ray room, that was very exciting, wasn't it?

(TC: 00:01:13)

Sushma Jansari: It was really bizarre. I knew that, you know, this room existed, because he does tweet about it, but to actually be in this really small-, well, actually no, it's quite huge, actually, wasn't it, now thinking back?

(TC: 00:01:25)

Hugo Chapman: Small? What?

(TC: 00:01:26)

Sushma Jansari: This massive concrete bunker, kind of, room.

(TC: 00:01:28)

Hugo Chapman: I know you've just moved into a new office, Sushma, so almost everything looks small to you, but I thought it was quite a big space. Tall, yes, high.

(TC: 00:01:36)

Sushma Jansari: Yes. And also, I was amazed at how big an object he can fit into that room and do a whole, you know-,

(TC: 00:01:44)

Hugo Chapman: 360.

(TC: 00:01:44)

Sushma Jansari: 360 scan, or rather, yes, X-ray of it.

(TC: 00:01:48)

Hugo Chapman: And also, as we learnt also, tiny things like Kinder Eggs, should we need to know what's inside the Kinder Egg. Yes, so that was very interesting.

(TC: 00:01:58)

Sushma Jansari: I was still quite surprised that he hadn't eaten the Kinder Egg. I don't know, the idea of having chocolate in your office and not eating it just seems slightly alien to me.

(TC: 00:02:05)

Hugo Chapman: He's a scientist.

(TC: 00:02:06)

Sushma Jansari: That's true, they are strange creatures.

(TC: 00:02:09)

Hugo Chapman: Sushma, we're in the bowels of the earth below the British Museum, explain where we are.

(TC: 00:02:15)

Sushma Jansari: Well, from what I understand from the, 'Danger, radiation risk,' sign on the bright yellow wall, I think we're about, sort of, I don't know, the entrance of a huge X-ray room?

(TC: 00:02:26)

Hugo Chapman: Yes, that's right.

(TC: 00:02:27)

Sushma Jansari: Okay, tell me more.

(TC: 00:02:29)

Hugo Chapman: And who are we with?

(TC: 00:02:30)

Sushma Jansari: Oh, yes, what is your name? What do you do?

(TC: 00:02:33)

Dan O'Flynn: Hello, my name's Dan O'Flynn, and I work in the museum as an X-ray imaging scientist. So, it's my job to look under the surface of the collection.

(TC: 00:02:42)

Sushma Jansari: How did you get to become an X-ray image scientist at the British Museum? That must have been an interesting career path.

(TC: 00:02:49)

Dan O'Flynn: Yes, there's a weird career path. I did a PhD in Physics, and I studied Materials Science, and a big part of learning about materials is to use X-rays in lots of different ways. And then after my PhD, I moved to a Medical Physics department at University College London, just up the road, and I learnt all about X-ray physics, X-ray imaging techniques, and then I learnt that the British Museum had just built a new X-ray imaging lab, and they were looking for a scientist to run it.

(TC: 00:03:19)

Sushma Jansari: You thought (talking over each other 03.19).

(TC: 00:03:20)

Dan O'Flynn: I put a tentative application in, and here I am, yes.

(TC: 00:03:23)

Sushma Jansari: Wow, congratulations.

(TC: 00:03:24)

Dan O'Flynn: Thank you.

(TC: 00:03:25)

Sushma Jansari: Did you always want to work with objects, or was it, sort of, more medical material that you were-, I say 'medical material', I mean people, that you were interested in X-raying?

(TC: 00:03:34)

Dan O'Flynn: I think I've always been interested in the application of science in interesting, real-world scenarios. So, that could be medicine, security, industry, cultural heritage, studying museum objects, for example. But anything where there's an interesting application of science and it's not just theoretical is what interests me.

(TC: 00:03:54)

Sushma Jansari: Excellent, cool, well, I'm looking forward to seeing what you have to show to us today.

(TC: 00:03:58)

Hugo Chapman: So, why is this underground? Is that because of the stability?

(TC: 00:04:02)

Dan O'Flynn: Mainly, yes. It's easier in terms of building the actual room that the X-ray kit is housed in, which I'll show you shortly. There are a lot of very thick walls surrounding the lab so the X-rays don't leak into the adjacent rooms, obviously that was very important from a safety point of view.

(TC: 00:04:21)

Hugo Chapman: I mean, we noticed you've glowed slightly in the dark.

(TC: 00:04:24)

Dan O'Flynn: Yes. So, there are a lot of safety features in place to make sure that we don't accidentally get-, any radiation, etc. is very dangerous, so the room is a big concrete bunker, with a big, yellow, lead door.

(TC: 00:04:39)

Hugo Chapman: So, we know where to head for when the klaxon for World War III-, okay, can we look inside?

(TC: 00:04:45)

Dan O'Flynn: Yes, of course.

(TC: 00:04:45)

Hugo Chapman: Can we pull aside the yellow-,

(TC: 00:04:47)

Dan O'Flynn: Before I open them, I should say the X-rays are off, so we're safe to do that.

(TC: 00:04:50)

Sushma Jansari: Oh, yes, that's good to know.

(TC: 00:04:51)

Hugo Chapman: That's good, good to know.

(TC: 00:05:00)

Sushma Jansari: With the door opening, it feels very exciting, all of a sudden, excitement has mounted, it's like, 'Oh!'

(TC: 00:05:06)

Hugo Chapman: Wow, it is big. It is huge.

(TC: 00:05:08)

Sushma Jansari: Wow. It's a lot bigger than I expected. It's almost as big as the Room 3 gallery where we have the temporary displays, isn't it? About that kind of size.

(TC: 00:05:18)

Hugo Chapman: So, give us the dimensions of the room. You can tell from the sound of our voices that we've entered a much larger area.

(TC: 00:05:26)

Dan O'Flynn: So, the room is about 5m x 6m in area, and then about 6m tall. So, it takes up two floors in this building.

(TC: 00:05:36)

Sushma Jansari: Why is it that size? Is it so you can have really huge objects in here, or is it just, I don't know, for the equipment?

(TC: 00:05:42)

Dan O'Flynn: Yes, it's a bit of both. So, we have quite a quirky X-ray system here in that everything can move around the room, and that means that we're able to look at big things. So, we can bring statues in here, and we can interrogate them by moving everything around the statue, rather than having to move a statue up and down.

(TC: 00:06:02)

Hugo Chapman: So, you've got a circular plinth here, so let's say we put-, one of the largest objects must be the Diskobolos, the discus thrower, the marble, that used to be on the stairs in the entrance of the British Museum. So, that's quite a big-,

(TC: 00:06:22)

Dan O'Flynn: Yes, that's right. So, that statue weighs 800kg, and we can actually accommodate-, on this turntable we can accommodate 2,000kg. So, the heaviest object we've had on here so far is the Diskobolos, and that was fine. I haven't tried any higher than that yet.

(TC: 00:06:37)

Sushma Jansari: Oh, okay. I was going to ask you what's the biggest object you've had on it.

(TC: 00:06:40)

Dan O'Flynn: So, the Diskobolos, yes, I think that's the tallest, so that's about 1.75m.

(TC: 00:06:46)

Hugo Chapman: And so this system allows you a 360 scanning of that object?

(TC: 00:06:52)

Dan O'Flynn: So, in that case we did flat, two-dimensional images. We were actually looking in that case to learn about how the statue was put together after it was found. So, the statue was found in the late 18th century, in Rome, or near Rome-,

(TC: 00:07:08)

Hugo Chapman: And it was already broken.

(TC: 00:07:09)

Dan O'Flynn: It was in fragments when it was found, it was put back together again. The head is famously not facing the right direction.

(TC: 00:07:14)

Hugo Chapman: I know.

(TC: 00:07:16)

Dan O'Flynn: Then the statue was registered in the British Museum in 1805, which is about 90 years before the discovery of X-rays.

(TC: 00:07:24)

Sushma Jansari: Oh, wow, okay.

(TC: 00:07:25)

Dan O'Flynn: And because the restoration of the statue, putting it back together, was done before it arrived in the museum, we don't have a record of how that was done. So, the statue was on loan in India for an exhibition called India and the World at the start of last year, and when it came back, the conservation team here, Karen Birkhölzer, stone conservator, asked me if I could look at how the statue was put together, in terms of, are the pieces stable that have been attached to the statue? Is there any likelihood of anything falling off? So, we brought the statue in here, so the heavy object handling team brought it in here in its shipping container, and the statue was un-crated in the lab, and the statue was placed on this turntable. And then we were able to use X-ray imaging to look at all of the different regions of the statue and find that big pieces of metal are holding together the different parts. So, the arms, and the head, the wrists, they all have big metal pieces attaching them. So, based on that knowledge, the conservator was very happy that the statue was stable.

(TC: 00:08:33)

Hugo Chapman: So, I mean, it sounds a very obvious question, I think we all have seen an X-ray scanner at work, either as we go through an airport-, in simple, layman's terms, what does an X-ray machine do?

(TC: 00:08:46)

Dan O'Flynn: So, X-rays, they're basically a really high energy form of light. So, you know when light goes to different energies you have infrared, visible, ultraviolet, the only thing that's different there is the wavelength of the light is different. And if you keep making that wavelength smaller and smaller, you go into the X-ray range. And that means that they are more likely to pass through material than visible light, and we use that to our advantage. So, the more dense an object is, generally speaking, the more it will stop objects getting though it. So, if you imagine my hand, if I put my hand in front of-,

(TC: 00:09:21)

Hugo Chapman: Or Munch's hand.

(TC: 00:09:22)

Dan O'Flynn: Or Munch's hand, yes.

(TC: 00:09:22)

Hugo Chapman: Because in the just-closed museum, there was an X-ray of after he'd been shot in a lovers' tiff, and there was the bullet lodged in his left hand, and that was a very early-, I think 1905, beginnings of X-ray.

(TC: 00:09:36)

Dan O'Flynn: I think that was one of the first ever medical X-ray images, yes, that's right. So, the first ever X-ray image was of the wife of the discoverer's hand, so Bertha Roentgen, her hand is the first ever X-ray image, and that was in 1895.

(TC: 00:09:50)

Hugo Chapman: Presumably not quite with the, sort of, health and safety surrounding it?

(TC: 00:09:53)

Dan O'Flynn: Not at all, no. They didn't know of the health problems of X-raying for quite a long time in terms of cellular, (TC 00:10:00) molecular damage.

(TC: 00:10:01)

Sushma Jansari: So, what are the most interesting kind of objects you've been able to X-ray? I mean, one of the things I'm thinking of particularly is a cuneiform tablet which was encased in clay.

(TC: 00:10:12)

Dan O'Flynn: Yes.

(TC: 00:10:13)

Sushma Jansari: So, how did you get to actually read the contents of that? How does that even work?

(TC: 00:10:18)

Dan O'Flynn: So, this is a new thing for the museum in terms of doing work in-house. So, we did a CT scan in order to reveal what happened inside that cuneiform tablet.

(TC: 00:10:27)

Hugo Chapman: So, what's a CT scan?

(TC: 00:10:29)

Dan O'Flynn: So, a CT scan is a three-dimensional X-ray picture. So, if you think about traditional-,

(TC: 00:10:33)

Hugo Chapman: So that tube that you see in movies, people being, kind of, put into, that's a CT scanner, isn't it?

(TC: 00:10:39)

Dan O'Flynn: Yes, that's right, yes. So, there's a, kind of, doughnut-shaped section which actually contains an X-ray tube and something to record the X-rays that come out of it, and that spins around really fast, and a patient is passed through that spinning system. And what that is doing is taking an X-ray from every angle, and then you use that information to make a 3D volume. So, you don't just get the surface information, you get everything under the surface as well. So, that volume, you can cut, and you can chop any way you want, and then you can see what's inside something.

(TC: 00:11:11)

Hugo Chapman: And we put mummies-, some of our mummies, through the CT scan?

(TC: 00:11:15)

Dan O'Flynn: Yes, that's right. So, the human mummies in the museum have been taken to hospitals to medical CT scanners in order to look underneath the wrappings or inside the sarcophagus. The idea there is it's completely non-destructive.

(TC: 00:11:30)

Sushma Jansari: So, the cuneiform tablet was actually enclosed in the clay because it was essentially, like, an ancient envelope, and it had the address on the front, but there was no way of reading inside the envelope, the ancient envelope, to understand the message. So, it's quite exciting that you were able to use your special X-rays to reveal the message.

(TC: 00:11:50)

Dan O'Flynn: Yes, so, the tablet itself, it's about 3cm long, and it's a clay tablet with impressions on it, which is cuneiform writing, and that tablet was encased in an envelope, and the envelope is made of clay. And so what we have is essentially an administrative document which was sealed in a clay envelope to protect the contents of the tablet from being tampered with, or at least that's the current thinking. And that envelope was rolled over with a cylinder seal, which was the seal of the person who oversaw this transaction. And the envelope was never opened, because there was presumably never a dispute, therefore, we can now interrogate what's inside there without having to break open the envelope and damaging a historic artefact.

(TC: 00:12:43)

Sushma Jansari: How old was that particular cuneiform tablet?

(TC: 00:12:46)

Dan O'Flynn: That tablet is 4,000 years old.

(TC: 00:12:48)

Sushma Jansari: Wow.

(TC: 00:12:50)

Hugo Chapman: That's very late unanswered, unread mail, really.

(TC: 00:12:53)

Dan O'Flynn: Yes.

(TC: 00:12:55)

Hugo Chapman: Makes me feel better about all my emails.

(TC: 00:12:58)

Dan O'Flynn: So, that tablet, when I CT'd it, I was able to see the cuneiform writing on the inside, and then obviously I can't read that, so-,

(TC: 00:13:07)

Hugo Chapman: So, that's fully-,

(TC: 00:13:08)

Dan O'Flynn: (Talking over each other 13.08) Jonathan Taylor in the Middle East department was able to read that and translate.

(TC: 00:13:14)

Sushma Jansari: I imagine there was a moment of high excitement and shrieks of joy.

(TC: 00:13:18)

Dan O'Flynn: Yes, definitely in the lab there was, yes.

(TC: 00:13:22)

Hugo Chapman: So, aside from the cuneiform tablet and the Diskobolos, what other objects, what other applications are there for this equipment?

(TC: 00:13:32)

Dan O'Flynn: So, generally speaking, we use X-rays in the museum in order to understand how objects were-, how they were originally made, what their current condition is, and if you have an object which is inside a box or wrapped up in linen, for example, or if it's under a layer of corrosion, we're able to look at that non-destructively. And then when you have animals, for example, you can learn about the death of animals, what their last meal was, and other such-, without having to physically dissect or open anything and damage for the future.

(TC: 00:14:08)

Sushma Jansari: Has there ever been anything unexpected inside something, or nothing at all where you expected to find something?

(TC: 00:14:16)

Dan O'Flynn: Yes, so it's quite common with, for example, animal mummies, for the bundle to not contain what it's thought the bundle contains. So-,

(TC: 00:14:24)

Hugo Chapman: So, you think you've got a cat mummy but-,

(TC: 00:14:28)

Sushma Jansari: Actually there's a frog inside.

(TC: 00:14:29)

Hugo Chapman: You've been duped.

(TC: 00:14:29)

Sushma Jansari: Yes.

(TC: 00:14:30)

Dan O'Flynn: There is one that was a bundle of snakes. Which, it was unknown at the time. It's a rectangular-shaped bundle, very ornately, very prettily wrapped, and what was actually inside was unknown, and then an X-ray image revealed several small snakes, probably seven or eight snakes.

(TC: 00:14:47)

Hugo Chapman: Fascinating.

(TC: 00:14:48)

Sushma Jansari: Yes.

(TC: 00:14:49)

Hugo Chapman: Dan, I hear that you're the man to speak to if we want to know what's inside a certain German confectionery, is that right?

(TC: 00:14:58)

Dan O'Flynn: Yes, that's right. So, not long after I started here, I was thinking about interesting ways to showcase what we're capable of doing in the lab, so I took a CT scan of a Kinder Surprise. So, with a CT scan-,

(TC: 00:15:13)

Hugo Chapman: Thereby ruining the surprise.

(TC: 00:15:15)

Dan O'Flynn: Of course, yes. I actually haven't opened it yet, so that was, kind of, the key message I wanted to impart with this, was that we can CT a Kinder Egg, and I knew from the wrapping of the Kinder Egg that it had a Hello Kitty toy inside, so I took a CT of the egg, and then uncovered the little plastic toy on the inside, of a Hello Kitty. And then I published that on Twitter, and people still come to me and say, 'Oh, I saw your Kinder Egg on Twitter,' rather than any museum object that I've scanned.

(TC: 00:15:43)

Hugo Chapman: Forget the Diskobolos, it's the Kinder Egg that really did it.

(TC: 00:15:44)

Sushma Jansari: Everyone loves chocolate.

(TC: 00:15:46)

Hugo Chapman: Yes.

(TC: 00:15:46)

Dan O'Flynn: But the key point I wanted to impart there is that the egg is still intact, and we haven't had to open the egg in order to learn about what's inside.

(TC: 00:15:53)

Sushma Jansari: Hang on, you haven't eaten the chocolate yet?

(TC: 00:15:55)

Dan O'Flynn: No, I haven't.

(TC: 00:15:57)

Sushma Jansari: Oh, my god, what is wrong with you?

(TC: 00:15:58)

Hugo Chapman: Hide it, quickly.

(TC: 00:15:59)

Sushma Jansari: I'm on my way.

(TC: 00:15:59)

Hugo Chapman: Sushma's here. And Dan, where can we find out what you're doing?

(TC: 00:16:07)

Dan O'Flynn: I'm on Twitter, of course.

(TC: 00:16:10)

Hugo Chapman: Of course.

(TC: 00:16:10)

Dan O'Flynn: I have a Twitter account which I update whenever I have something exciting to share.

(TC: 00:16:14)

Sushma Jansari: Which is quite regularly, because I follow you on Twitter, and there's often some really exciting things on there.

(TC: 00:16:18)

Dan O'Flynn: Yes, I try my best. So, I think that's the best way. We're obviously-, as a department, we're interested in disseminating our research however we can, so I do talks, I've done some talks in the museum to members, and talks in the Great Court to the public. Also, we publish in scientific journals as well.

(TC: 00:16:38)

Hugo Chapman: Dan, thank you very much for talking to us, it's been absolutely fascinating, hasn't it, Sushma?

(TC: 00:16:42)

Sushma Jansari: It has, yes. I'm already thinking of different projects I want to work on with you. So, yes, watch this space.

(TC: 00:16:47)

Dan O'Flynn: Brilliant. Thanks, both, for coming to visit.

(TC: 00:16:50)

Sushma Jansari: We mentioned that this month we have a mystery object, and we do. Dora Thornton tells us about a special platter that's currently on display in the Waddesdon Bequest gallery. It's part of a new series that's coming up on the British Museum's YouTube channel in the next few months, so subscribe now.

(TC: 00:17:07)

Dora Thornton: I'm Dora Thornton, and I'm the curator of the Waddesdon Bequest, which is a fantastic collection of medieval and Renaissance treasures, permanently displayed in gallery 2A on the ground floor of the British Museum. And I wanted to introduce an object which it's quite easy to walk past and not really take in. So, this is a very large oval platter, and it's a presentation dish. I don't think you'd necessarily have used it for formal dining, but you would have displayed it on a buffet, and it is very, very beautifully done so that you would want to display this, its a showpiece. It's built up with layers of painted enamel on this copper substrate. The dish itself shows a complex scene, which is an illustration of a book in the Bible. It's the Book of Revelation, and it's the moment where the woman of the apocalypse appears. This is a vision that was given to St John on the island of Patmos, and he describes this woman of the apocalypse as 'the whore of Babylon', a prostitute, that's why she's shown bare-breasted, sitting rather drunkenly on the side of a seven-headed dragon, which is described in detail in the text. And she's holding up a cup, a silver-gilt wine cup, filled with the 'filthiness of her fornication', it says in the Bible, in the King James translation. So, this represents all her sinfulness and her sinful nature, her sinful past, that she's holding up for examination. The dragon itself is worth a look, because it's made out of the most wonderful melding of different enamel colours.

It's got this, kind of, mauve ground, and the scales of this dragon are picked out in gold so that you really get a sense of the musculature of this beast. And as she's sitting there, before her are kneeling a group of men, mostly priests, one of them is wearing the papal tiara, or what looks like the papal tiara, there's a cardinal with his red cardinal's hat, and a series of princes, and princes of the church. And they're kneeling in supplication and horror towards this vision of the whore of Babylon, and in the background, there's a city which is intended to represent Babylon, the ultimate sinful city, that is about to be destroyed. So, it's a picture of the apocalypse, the end of the world, and how it's going to happen, as told in the Bible, in a way that was a very vivid thing that people thought was actually going to happen in 16th century Europe. The plate was made in Limoges, in France, which specialises in this kind of enamelled work, and the artist has actually signed the piece in gold on the back, Courtois, you can see that on a little, sort of, pavilion-style tent-like structure on the back of the plate. And this is for Martial Courtois, who specialised in the brilliance (TC 00:20:00) of colouring, and in the use of foil, that is silver foil, literally like modern kitchen foil, which he put underneath some of the translucent enamels, and if you look at the details on the front, you can see this very clearly. And here, for example, this kneeling foreground figure, the man in a blue tunic, if you look, he's got a red backing to his tunic, and that is actually translucent red over this silver foil.

Now, the tunic of that figure in the foreground, that kneeling figure, is actually rather interesting, because this technique of using foil in the 16th century is actually very delicate, and it's often damaged over the years. So, 19th century collectors of these pieces often bought pieces that were, by necessity, damaged. And of course as they wanted to show these pieces in their collections, they often wanted them to look as good as they could, so 19th century enamellers were interested in repairing these pieces as well as they could. And this piece is particularly interesting, because you can see that repair very clearly. If you look at that kneeling figure of the man in the blue tunic in the foreground, if you go round the figure, there's a, sort of, outline around most of his tunic, and if you follow that round with your eyes, you can see that that is actually a replacement section in the copper. In other words, a 19th century repairer has taken out that damaged section and fired a new piece, cut exactly to fit back onto the original surface of the 16th century plate. What's particularly exciting about this is we know exactly who did this, a man called Alfred André in Paris, who was a most expert restorer, who seems to have invented this technique of repair in the 19th century. And we know that he did it because we have his drawing, his design, for this particular repair, in an archive in Paris. And so we were able to find the drawing before his repair, and compare it with the piece as we have it in the Waddesdon Bequest, and show how he actually designed and made this extraordinarily good repair.

And I think you have to imagine this on the wall of the Smoking Room at Waddesdon, seen by flickering light of the fire, or by newly-installed electric lighting, quite new in the 1890s, and I think it sums up a lot of the preciousness and the value of the objects in the Waddesdon Bequest.

(TC: 00:22:30)

Female Speaker: It's back to school time. Why not head to the British Museum's shop online for all your back to school stationery needs? We have pens, pencils, notebooks, bookmarks, stickers, rulers, pencil cases, sketchbooks, mouse mats, pen drives, paperweights, and pencil sharpeners, everything you might need for heading back to school. And for the uni student in your life, why not get them a fetching, conversation-starting, museum-inspired tea towel? Because what better way to make lifelong friends than in the lifelong experience of washing up? Head to the britishmuseumshoponline.org, that's britishmuseumshoponline.org, today. All purchases support the work of the British Museum.

(TC: 00:23:06)

Sushma Jansari: And now we have Sian and Francesca in the archives, they're talking about the first woman curator at the British Museum, and also, intriguingly, modesty boards.

(TC: 00:23:16)

Sian Toogood: Hi.

(TC: 00:23:17)

Francesca Hillier: Hello.

(TC: 00:23:18)

Sian Toogood: So, Francesca, our eagle-eared listeners might be picking up a nice, big, echoey sound. Where are we?

(TC: 00:23:27)

Francesca Hillier: We are in the museum's Round Reading Room.

(TC: 00:23:30)

Sian Toogood: Which, as ever, is so exciting. I've been in here many times throughout the eight years that I've worked here, and it's glorious.

(TC: 00:23:41)

Francesca Hillier: It is glorious.

(TC: 00:23:44)

Sian Toogood: So, for those of you who do not know, the British Museum's Round Reading Room is closed to the public at present, but when it was open, was graced by the likes of Karl Marx, and-,

(TC: 00:23:57)

Francesca Hillier: Bram Stoker, Oscar Wilde.

(TC: 00:23:58)

Sian Toogood: Virginia Woolf, yes.

(TC: 00:24:00)

Francesca Hillier: Beatrix Potter.

(TC: 00:24:00)

Sian Toogood: Beatrix Potter, oh, Beatrix Potter. And is an absolutely huge, circular room with an amazing arching dome, which is decorated in a, kind of, lovely light blue, with gold trim. It's very-,

(TC: 00:24:19)

Francesca Hillier: Gold leaf.

(TC: 00:24:20)

Sian Toogood: Oh, gold leaf.

(TC: 00:24:20)

Francesca Hillier: Gold leaf.

(TC: 00:24:21)

Sian Toogood: Sorry, I apologise. And it's really beautiful, actually. And a very calm place to be.

(TC: 00:24:29)

Francesca Hillier: And quiet. And right in the centre of the museum on a rainy day like it is outside, beautifully peaceful inside.

(TC: 00:24:36)

Sian Toogood: Yes. So, actually, we are in the museum during public opening hours, in the very heart of the museum, and you cannot hear a peep.

(TC: 00:24:44)

Francesca Hillier: You can't.

(TC: 00:24:45)

Sian Toogood: But the reason that we're here today is that we are looking at some of the old staffing documents from the archives.

(TC: 00:24:56)

Francesca Hillier: Yes, we are.

(TC: 00:24:56)

Sian Toogood: And the reason that I asked this is because one of our lovely HR people, who is an avid listener to the podcast, asked for some information, and I came to you, and here we are.

(TC: 00:25:13)

Francesca Hillier: And here we are.

(TC: 00:25:14)

Sian Toogood: So, what have you found?

(TC: 00:25:16)

Francesca Hillier: Well, in quite a civil servant-y sort of way, the museum was a, sort of, non-departmental civil service concern, I suppose. They used to record every single member of staff who worked here in lists of the establishment, and if you were a member of paid salaried staff, you were counted as established, and therefore you went onto the list of establishment.

(TC: 00:25:38)

Sian Toogood: Lovely to be established.

(TC: 00:25:40)

Francesca Hillier: And the lists of the establishment were started in the 1840s, and they're very detailed, and they list every single member of staff in every single department, what they earned, when they first were employed, and what's quite interesting is that they also list when you were promoted, so when you took your next role within the museum. So, there are two columns, the first column is when you were first employed, and the second column is when you achieved your current role. And to have those two columns, it would seem to me that they assumed that people came to work here, and they stayed for a very long time, and then they possibly worked their entire lives here. I think the longest serving member of staff was something like 65 years, who had started working here as a stonemason, as an apprentice stonemason, when he was about fourteen or fifteen, and he left whatever 65 years is on top of that. He worked here a very, very long time.

(TC: 00:26:35)

Sian Toogood: There was one particular curator that you were going to talk to me about.

(TC: 00:26:37)

Francesca Hillier: Yes, we've been looking at the role of women in the museum and when women were first employed, and we can tell by looking at the lists of the establishment when women were employed. Certainly before the First World War, there weren't any women working in the museum who weren't either housekeepers or cleaners. When the museum first opened, there were staff residences on-site, and the women who worked here were the charwomen and the housekeepers. And it wasn't until after the First World War, when there were less men, that women began to be employed in any kind of more-, not curatorial at that point, but certainly there were women who worked on the postcard stall, which was the first commercial activity in the museum, and that was in the front hall.

(TC: 00:27:22)

Sian Toogood: And I think that's probably true across the UK, that women started taking on greater responsibility in a way that they just hadn't previously.

(TC: 00:27:30)

Francesca Hillier: I think that's true.

(TC: 00:27:31)

Sian Toogood: And the museum, as ever, is a, kind of, microcosm for that social structure. So, this is not the same time period, but I heard a rumour that women used to get a shoe allowance.

(TC: 00:27:42)

Francesca Hillier: I think that's probably true. They certainly had a uniform allowance, but for women walking around-,

(TC: 00:27:49)

Sian Toogood: In their high heels.

(TC: 00:27:50)

Francesca Hillier: Possibly. And for the women working in the shops. There was certainly an issue with women in the Iron Library, the Iron Library that surrounded the Round Reading Room, which was the big oblong iron structure that was right round the edge of the Reading Room.

(TC: 00:28:05)

Sian Toogood: Where the Great Court is now.

(TC: 00:28:05)

Francesca Hillier: Where the Great Court is now. Because that was built with open iron structure, open ironwork, and so all the walkways were open ironwork because they were built with men in mind. When they started to employ women in the library, if you were underneath a woman walking across the iron walkway-,

(TC: 00:28:19)

Sian Toogood: Oh, I was thinking heels, but-,

(TC: 00:28:21)

Francesca Hillier: You could see straight up a lady's skirt, and that was obviously hugely frowned upon. So, what they did was put in what they called modesty boards-,

(TC: 00:28:32)

Sian Toogood: Oh, fantastic.

(TC: 00:28:33)

Francesca Hillier: All the way across, so that you couldn't look up a woman's skirt from beneath. But quite quickly, they realised that this hugely increased the moisture levels in the Iron Library, and therefore was completely inappropriate, because all it did was make things rot. And the whole point of the Iron Library was that the air circulation was good, because everything was open.

(TC: 00:28:52)

Sian Toogood: I love that they didn't just think, 'Maybe a lady could wear trousers.'

(TC: 00:28:56)

Francesca Hillier: No, no, no, no.

(TC: 00:28:57)

Sian Toogood: Or a pair of, like, modesty knickers like you had at school.

(TC: 00:29:03)

Francesca Hillier: PT pants.

(TC: 00:29:04)

Sian Toogood: Yes.

(TC: 00:29:04)

Francesca Hillier: Do you remember those?

(TC: 00:29:05)

Sian Toogood: Yes. Let's go back to my friend in HR, a little shout out to Russ. What can you tell me about staffing at the museum?

(TC: 00:29:17)

Francesca Hillier: Well, I think it's really interesting going back to the lists of the establishment, because that really shows what the museum's focus was, and you can see how many members of staff worked in each department, and that really shows you what their interests were. The very earliest records just show how important the printed books departments were, because so many more people worked in the printed books section.

(TC: 00:29:38)

Sian Toogood: Well, I mean, the head honcho was the principal librarian, once upon a time.

(TC: 00:29:43)

Francesca Hillier: Yes.

(TC: 00:29:44)

Sian Toogood: And now its director.

(TC: 00:29:45)

Francesca Hillier: It became principal librarian and director at one point, and then it just became director. But it is interesting looking at the lists of the establishment, because you can see how many people were employed in each department, and how that changed over the years. You can see that we (TC 00:30:00) had our own firemen on the staff, they were part of the established staff, we had our own police at one point, we had our own stonemasons, and we had our own labourers, and window cleaners, and book dusters, and all of that is recorded.

(TC: 00:30:12)

Sian Toogood: Yes, those lovely professions that are only in the British Museum, I think. So, when do we get our first female curator, for example?

(TC: 00:30:24)

Francesca Hillier: I think the first female curator was Elizabeth Senior, and she worked in the prints and drawings department, in 1934 she was first employed.

(TC: 00:30:33)

Sian Toogood: 1934. What does it say about her, please?

(TC: 00:30:38)

Francesca Hillier: It says, 'On the trustees' committee meeting on 12th May 1934, appointment Miss E. Senior was submitted, appointed by the principal trustees on 13th April of that year, Miss Elizabeth Senior as assistant keeper, second class. She began duty in the prints and drawings department on 19th April 1934.'

(TC: 00:31:02)

Sian Toogood: Assistant keeper? She went in quite high.

(TC: 00:31:05)

Francesca Hillier: Pretty impressive, yes. And this is extremely unusual, up to this point we hadn't had any women in any kind of curatorial roles.

(TC: 00:31:15)

Sian Toogood: Wow. I bet she was formidable.

(TC: 00:31:18)

Francesca Hillier: I've never seen a picture of her, I bet she was formidable. I hope she was formidable.

(TC: 00:31:23)

Sian Toogood: Yes, I think in my mind she is, and that's all that matters.

(TC: 00:31:27)

Francesca Hillier: Certainly all the correspondence you see between staff in the museum in this period, and even up to the 1980s, much of the correspondence was you would be referred to by your surname only. And even the women would be referred to by their surname and not their first names.

(TC: 00:31:46)

Sian Toogood: I do remember a female curator telling me that when she started in the museum, the nearest bathroom that she could use to her office was at Tottenham Court Road tube station.

(TC: 00:32:00)

Francesca Hillier: There is a discussion about putting women's toilets in, in the trustees' minutes somewhere. I can't remember the date of it, but I've seen that discussion, 'We really must provide-,'

(TC: 00:32:09)

Sian Toogood: Yes, it would be nice, right?

(TC: 00:32:10)

Francesca Hillier: Yes.

(TC: 00:32:11)

Sian Toogood: Yes. I have to say, I was outraged, because not only that's ridiculous, but also, because they've obviously removed the bathrooms at Tottenham Court Road tube station, and I think all tube stations should have that. So, come on, TfL.

(TC: 00:32:25)

Francesca Hillier: I agree.

(TC: 00:32:28)

Sian Toogood: Cool. Thank you very much-,

(TC: 00:32:30)

Francesca Hillier: You're welcome.

(TC: 00:32:31)

Sian Toogood: For this, sort of, flight through the indexes and minutes of the trustees. Hopefully we can find out something more of interest for next month. If anyone out there listening has a desperate desire to know something specific from the archives, perhaps they could tweet at us, and let us know, and we'll definitely try and have a hunt through and find something for you.

(TC: 00:33:00)

Francesca Hillier: In case your great-great-great-grandfather worked here. We get quite a few enquiries that way.

(TC: 00:33:04)

Sian Toogood: Oh, I was going to look up Toogood. Never mind, next time.

(TC: 00:33:07)

Francesca Hillier: We can do that another day.

(TC: 00:33:08)

Sian Toogood: Another day. But until then, until next month, fare-thee-well.

(TC: 00:33:15)

Francesca Hillier: Goodbye.

(TC: 00:33:17)

Hugo Chapman: So, thank you so much for listening, and please leave us reviews on iTunes, which allows you to comment, give us star ratings. What are we looking for?

(TC: 00:33:26)

Sushma Jansari: I think a five-star review would be very welcome.

(TC: 00:33:30)

Hugo Chapman: But of course there are other providers out there, but only iTunes allows you to actually give those star ratings.

(TC: 00:33:36)

Sushma Jansari: And do comment on Twitter if there's anything you would like us to talk about, or anyone you'd like us to talk to. Any suggestions are very welcome.

(TC: 00:33:45)

Hugo Chapman: Indeed. No, we love feedback.

(TC: 00:33:47)

Sushma Jansari: Especially positive feedback.

(TC: 00:33:51)

Hugo Chapman: Quite. See you next month.