

**Transcription of Podcast Interview  
Dr. Prudence Jones (PJ)  
and Dr. Dana Rovang, Obscure Histories (OH)  
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**OH: Today we are talking with Dr. Prudence Jones at Montclair State University in New Jersey. Dr. Jones has her BA from Wellesley College, *Summa Cum Laude*, in Latin and Natural History, and her MA and PhD From Harvard University in Classical Philology.**

**Thank you for talking with us today. I know that Cleopatra is a very small piece of your research, but the story about Cleopatra it's actually one of our most popular. So this is very exciting to be able to talk to you.**

PJ: Well, wonderful! I'm glad that Cleopatra is popular.

**OH: Yes, and the pearl story, specifically, because I think it touches on a lot of different things that people are curious about.**

**So could you broadly describe your research on Cleopatra's pearl and the scholarly debate about dissolving a pearl in vinegar.**

PJ: Well, probably the easiest way to get to that is to go back to how I first heard about this and got interested in it. When I was a high school student, we had a guest lecturer who mentioned that Cleopatra had drunk a pearl, and that sort of interested me. In high school I took a lot of Latin and History courses, and I also took a lot of science courses. So I was taking Chemistry at the time, and I thought, "Yeah, that might actually work."

So I tucked the idea in the back of my mind, and when I was an undergraduate, I had the opportunity to work with a Chemistry professor in his chemistry lab, and I thought, "Maybe I can try this. Because pearls have calcium carbonate in them and it would be an acid-base reaction, so there's a decent chance that something would happen if you put one of these things in vinegar."

So I asked my professor if I could do one of my experiments in his lab, and he was a fan of history of science, so he said, sure. I managed to get a hold of some irregular, and thus unusable, pearls from a friend of my parents who was a jeweler. Sometimes they get a piece of jewelry to take apart and make into something else, and if the pearl is irregularly shaped, it's only good for that piece. So they can't use it in something else and it's sort of worthless to them at that point. He gave me a couple of these that weren't usable for anything and weren't worth a lot of money

So, I got some pearls and I got some vinegar, and – I did some preliminary work with some oyster shells, because the inside of oyster shells is the same material as a pearl. I got the idea that something was happening there. And then I got the idea that it would be good to test different concentrations [of vinegar]. I actually made my own acetic acid solutions. 5-7% is standard vinegar. And then I made some that were less concentrated and some that were more concentrated.

Then I had various pearl analogs to try, as I could only do the real thing a couple of times. I had pieces of oyster shell. I had inexpensive cultured pearls – which are basically a plastic sphere placed inside an oyster and then the oyster puts a little bit of pearl on top of that, so you're not going to get the whole thing disappearing, but you can tell by weighing it before and after, and so on. And so I did these various experiments. I found out that the best concentration of acetic acid was just about what it is in vinegar. Less concentrated not much happens, and strangely enough, the higher concentration you go, not much happens, either. That was sort of a good project there.

Much later on after I finished grad school, I had the opportunity to give a conference paper on the topic, and that led to writing the article. It's something I've been interested in over a long period of time and worked on, on and off. But all the stages of the process informed the actual article. So that's the over arching description of how I did this.

Now, when I went to write the article, I wasn't expecting to find a lot of controversy over the fact that pearls will react with vinegar. Because having taken some chemistry, the idea that this probably does happen, is where I started. But I read a lot of stuff and I realized that was not where other people were starting from. Apparently, in the general imagination, this is a much more unlikely thing.

I started reading more article about this phenomenon, and it's not just about Cleopatra. It's reported that other people did this as well. The poet Horace tells about wealthy Romans dissolving pearls just to eat something really expensive. It's not just Cleopatra; this is something we get several references to in the Ancient World. But then, in the scholarship, it seems to have been dismissed as a kind of fantasy. So, that was interesting.

**OH: So, you mean “the scholarship” in terms of [scholars] in the nineteenth-century going back and reading these [accounts].**

PJ: Yeah. Somehow this piece of information got lost a little bit. Possibly because people stopped being decadent Romans having the time and money to destroy pearls in vinegar. If you're not trying, right? Perhaps people stopped doing that for a while. Reasonable enough.

So, I thought this could be a decent scholarly article because there's enough out there without performing any tests assumes that this isn't happening. And you could ask, "Does it really matter if we know whether it actually happens or not?" But it really does affect the way we interpret the descriptions in the ancient literature. If we think this is a fictional item, versus a version of something that could actually happen. That's really why I did the whole article, and looked at all the ancient sources and all the various stages of more modern scholarship on those sources. It was sort of interesting to go through all of that to trace the history of that idea. What became evident was once a couple of modern sources said that it wasn't possible, it kind of spread. A lot of people would cite that without checking: "Someone said that wasn't possible so I'll put that in my footnote, too."

**OH: Just because it's the easier way to go, or...**

PJ: Right, without actually going and doing the experiment, or seeing if that person was correct. It's just, "Someone said that who's a scholar so,..." That happens in footnotes. So it got perpetuated. I was trying to provide something of a corrective. Because you can actually destroy a pearl with vinegar!

**OH: So it appears.**

PJ: You can actually destroy a pearl with other things, too. You can destroy a pearl with hairspray. Not utterly destroy it, but you can ruin the surface.

I think another reason why people think we can't destroy pearls is that we tend to associate pearls with gemstones. Pearls are not as hard as gemstones. I think the tendency is to lump them in with things like diamonds and emeralds that are much more durable. You can actually damage a pearl.

**OH: Fascinating. So, I'm just curious about the sources, that people would just sort of take – one thing that we're trying to do here at Obscure Histories is really examine sources and see which is a more credible source than another. So, why to you think that sometimes people automatically ... is the source assumed to be credible because they are footnoted, or because someone hasn't done the due diligence to look at the research to make sure that what they're doing is on the up-and-up. Is it a little bit of both?**

PJ: I think it's actually both of those things. It's a combination of those things. The interesting thing that I found is that amid all the many sources that said, of course this is ridiculous, you can't destroy a pearl with vinegar, there are a couple that say that it is possible. They are in the minority. The interesting thing is, they are ... there were a couple of people all along who would occasionally try the experiment or at least look at the chemistry. The interesting thing is that it's the incorrect interpretation that caught on. They were both there, but the incorrect one caught on. Maybe because, I don't know, maybe it makes it a more interesting story to have

it be a fantasy. I'm not sure. But my research did uncover a couple of sources where someone had done the experiment, and then they were thoroughly ignored.

**OH: So, are you referring to Ludwig Friedländer?**

PJ: Yeah.

**OH: So, he was [doing experiments] in 1881.**

PJ: So, it was an interesting mix of sources, but the bulk of them tend to come down on the "This doesn't work" side. So, one of the ones ... [B.L.] Ullman was one that actually tried the experiment. Yeah, there are a couple of them.

But it's interesting to look at it from the point of view of what actually was known about different materials and how they interact in the ancient world and it's also interesting from the history of scholarship point of view. Those are sort of the two things that I was looking at in the article.

**OH: One thing that you talk about, too, is that it's more interesting to talk about Cleopatra as being decadent and being something of a wayward woman. And that angle because much more meaty, and it's easier to dismiss these claims about the pearls.**

PJ: Yes, and as time goes on, of course, the image of Cleopatra as engaging in this excessively luxurious and wasteful behavior becomes more her trademark than her intelligence and her scientific knowledge. In the ancient world, she was recognized as being an extremely educated woman. That side is perhaps less alluring to later ages. So that could also be part of the tendency for scholars looking at it to not gravitate to the scientific side.

**OH: Then it makes sense in multiple disciplines to go back and reexamine some stories from the ground up.**

PJ: Exactly. That's something I like to do in my research, is to start with the primary sources and see what they actually say. Because when you read slowly and carefully, sometimes you notice something.

**OH: And as a philologist, you have to pay attention to words and their multiple meanings.**

PJ: Yeah, that's kind of my training. I'm very focused on the language.

**OH: Thanks very much**