

I, DENTAL ANTHROPOLOGIST

July 26, 2013 Brenna Hassett Day of Archaeology, Day of Archaeology 2012, Post Medieval, Science dental anthropology, London, Natural History Museum, Neolithic, Tooth

It's that time again! Third year of my [#dayofarch](#) posts... if you're dying to see how they've changed over the years, have a look at 2011 ([augmented reality!](#)) and 2012 ([i reveal myself to be the tooth fairy](#))...

Really, I work at the Natural History Museum in London (and tweet at [@brennawalks](#) / blog at [passiminpassing.co.uk](#)). And if you didn't already know, I'm part of the collective Tumblr of awesome that is [Trowelblazers](#) ([@trowelblazers](#)). We get all excited about inspirational female pioneers in the trowel-blazing arts



So!

Archaeology, huh? Life outdoors? Fresh air?

Meh. Up to your hips in muddy water in February, more like it. That's why I went and got myself a speciality....

TEETH!

Yes. I am a living, breathing example of the incredibly rare animal... the *Dental Anthropologist*. And yes, that's a real thing.

What do I do? Well... today, I'm hashing out some code that will preform a simple spatial analysis that will tell me about the distribution of different types of tissue on a thin section of a tooth.

Before I could even get to this stage, however, there was a long and laborious process of making histological thin sections, digitally scanning histological slides, and then digitising lots of information from the tooth. But the end result will be that I will



know *to the day* the ins and outs of someone's childhood – growth faltering, chemical composition changes, and a host of other things that we can find out in the lab.

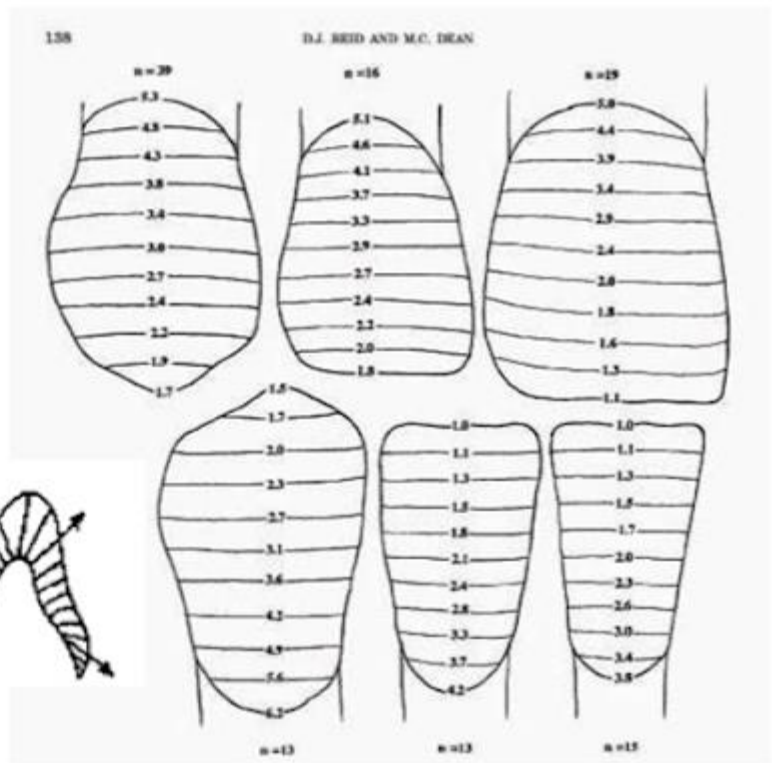
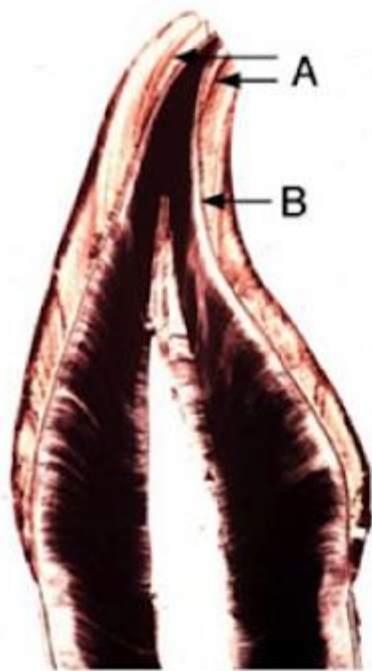
So why teeth? A few reasons:

1. Teeth don't remodel. You grow 'em once, and you're stuck with them.



With the rest of your skeleton, remodelling can hide traces of past events — if you broke your arm as a child, you might not ever know from looking at your adult skeleton. Whereas everything that happens to your teeth as they are growing is crystalised right at the moment, leaving an unedited record of the time when your teeth were developing.

2. Teeth grow in a very regular pattern. Like tree rings.



Because teeth are so regular, we know exactly which bits are forming when. So if something happens to a kid, like a bad fever or a period of starvation, that disrupts normal development, we can work out *exactly* when it happened. Take a look at these lines, left on a tooth from when the individual was so sick that growth stopped for a time. If we magnify it in a scanning electron microscope, we can work out how old the kid was in days when growth stopped:

(Image missing)

That's fairly impressive for a kid who has been dead for almost 200 years!

3. Everybody Teethes

Almost everyone has teeth! Teeth usually survive really well in archaeological sites because they are heavily mineralised – sometimes they are the only part of a skeleton left. In my current work, I look at both the teeth from modern humans (*super* modern. Like, the subjects are still alive) and the teeth from children who died nearly ten thousand years ago a continent away in Central Anatolia.

Actually, I'm gearing up now to leave for the field to go and take some casts of teeth of children who lived at the site of [Aşıklı Höyük](#) right when people were sorting out that whole 'to-settle-down-and-farm-or-not-to-settle-down-and-farm' question. The casting itself is a funny process, normally used by dentists, but turns out archaeologists can adapt just about anything...

<https://vimeo.com/45535322>