

Abigail Zorn

Can you provide our listeners with, like, a brief introduction to anthropology?

Libby Cowgill

Sure, sure. Nobody knows what anthropology is, so don't, don't feel bad about that if you're, if you're listening and going, I've, I have no idea what that big long word means. That's pretty common. All it is, is the study of humans.

So, there's a whole bunch of us out there who are looking at humans, human biology, human culture, human history, and trying to parse it out. And almost anything that studies humans falls under the rubric of anthropology, right? So, archaeologists, those, at least in the United States, are considered anthropologists.

Uh, you could be a cultural anthropologist, where you go off and study people's beliefs and customs. Or, you could be someone like me. I'm a biological anthropologist. Uh, my particular field - I usually study Neanderthals and early modern humans. I study a couple of other things about, uh, how your body responds to exercise and how your body responds to climate. But, biological anthropology includes genetics and studying primates and pretty much anything that is, you know, Human biology through the lens of evolution.

Abigail Zorn

So what specifically would you say led you to choose anthropology? Because it's not usually something that people like, that's what I want to be when I grow up.

Libby Cowgill

Yeah. Yeah. So, uh, my house is weird. My parents are weird. Uh, while I was growing up, my parents, who are not anthropologists, I'm actually first gen, so, uh, they actually don't even really work, in academia at all, they thought skulls were amazing. And so, whenever we would be out, like, walking around or hiking, they would find skulls on the ground and they would bring them back, and like, most people have cabinets full of china in their living room.

We, at last count, have 92 different animal skulls in my living room, all in china cabinets, all with like, cool little labels, uh, with their binomial nomenclature, their genus and their species name, like, underneath them. My earliest memories of spending time with my father are sawing off the head of a rotting sea lion on a beach.

So, when I got to college, I'm like, 'Bones are really neat. Maybe I'll, you know, what, what type of classes can I take that kind of tie into osteology, which is the study of bone? And, I took an Introduction to Biological Anthropology class and it was all downhill from there.

Abigail Zorn

So, you kind of touched on your specific area of expertise. What about it kind of fascinates you the most or why did you decide to focus on that?

Libby Cowgill

So, my initial focus when I was going through grad school was Neanderthals. And since then I've kind of branched off, into a bunch of different areas that are sort of inspired by my interest in Neanderthals. Neanderthals are awesome because they are about as close to being a modern human as you can get without being a modern human.

So, I sometimes tell my students that it's kind of like looking into like a crazy fun house reflection of yourself that's just a little distorted, right? They did all sorts of things that were similar to us. You know, they hunted, they lived in groups. They are very well adapted to extremely cold environments.

So they lived in glacial Europe. They were super jacked like we can tell, and I can go into that later if you're interested, uh, from a variety of different reconstructions of their bones, that they were really, really muscular. They also were not like us. Like they didn't really make a whole lot of art.

Right. So like all those beautiful cave paintings that you see in Europe and things, all those are made by modern humans. Neanderthals didn't seem to be super inspired to create that type of thing. So that, that juxtaposition that's so close to us, but like not quite us, uh, was always really fascinating for me.

Abigail Zorn

So you talked about that you are in like exercise sciences or the anthropology version of that or how fitness affects the human body. Can you talk a little bit more about like how, how that works or how your research works?

Libby Cowgill

How it dovetails with my research? So, your bones are basically just like your muscles.

And if you do a whole bunch of physical activity, uh, your body lays down more bone to resist the stress that that puts on your body. And if you lay on a couch and are a giant couch potato your whole life, your body takes away bone. And, once you know that, it's really You can basically look at skeletons in the past and draw conclusions about what they were doing with their lives.

It's one of the main techniques that we use in archaeology and paleontology to sort of reconstruct what people and other organisms did, uh, when they were alive. And that's how we know that Neanderthals were jacked. Uh, you probably have about 5 to 15 percent difference in the size of your upper arm bone, your humerus, right?

And that's just from doing things with your right hand most of your life, right? So your right arm is actually, like, a little bit bigger. Neanderthals were jacked. Their right arm was like 50 percent bigger than their left arm, right? So that would suggest, right, that they're doing something crazy with that right arm, right?

We find in the archaeological record these 7-foot-long, like, really heavy-duty thrusting spears, right? Apparently, that's how Neanderthals hunted, right? And, that could partially be why we see that huge difference in the size of one arm, right? Because if you're driving a stake into an animal, that actually takes a lot of power, right?

So, I started studying that originally and that's kind of, uh, It's dovetailed beautifully with my personal life. It was right around the time when I started weightlifting, um, and sort of getting into powerlifting on my own which I had started doing when I was first in graduate school - was first year of graduate school, so probably 22. So, I guess I've been lifting for 20 years now. Eventually, I became a CrossFit coach. I coach not very often, one class a week now at CrossFit Fringe down on Old 63, and all these things are kind of interwoven in my life at this point, right?

Thinking about how physical activity shaped the body then and how it shapes the body now, right?

Abigail Zorn

So, among all of your research projects, would you say you have a favorite or a couple of favorites and why they fascinate you?

Libby Cowgill

I'm loving what I do now, right? So, uh, I think I told you, so I started studying Neanderthals. So, I have this whole avenue of my research that's studying how bone responds to exercise throughout the lifespan, right? So I've looked at other groups of organisms other than Neanderthals, but I also got really interested in how people survive in extreme cold and extreme heat because of the fact that Neanderthals were people that were living in glacial Europe, probably without, I mean, they had clothes, don't get me wrong, they weren't running around naked or anything, but like, it wasn't.

Nobody had a North Face jacket, right? Like, these were fairly uninsulated clothes, right? These were just kind of hides and things that were tied together. So, what I do now is, like me and a couple of colleagues have what's called a climate chamber, where I take people every summer and I put them in, a very cold room, a very hot dry room, and a very hot humid room.

And, we measure a whole bunch of things about them and what we're trying to figure out is if certain body shapes do better in certain climates. So, we measure them. Neanderthals are just these big, stocky, short people. The best size reconstruction we have for like a male Neanderthal would probably be about 5'7 and 175 pounds of just solid muscle.

Right and that's been predicted to be adaptive for the cold, right? So, typically when you see people whose ancestors come from colder climates, they tend to be kind of stocky and broad. Whereas, people whose ancestors come from like the equator tend to be kind of long and lean. But nobody's actually ever tested it, right?

So basically, I spend all my summers baking, freezing, and steaming people to see if their body builds, their body shapes actually influence, like, how fast does their metabolism run when they're exposed to this? How much, how, how soon do they start shivering in there? Is a long, lanky person gonna start shivering before, like, a short, stocky person?

So, I've been doing that for the last two summers. I'll do it for the next two summers.

Abigail Zorn

I know that occasionally, you also work with law enforcement or get requests from law enforcement. Can, are you allowed to talk about that or explain a little bit about what that is?

Libby Cowgill

I think we can talk about that.

Yeah, so that's not my, there's something called a forensic anthropologist, right? Which is why often people end up taking my classes is because I think a lot of people are very interested in that. I am not one of those. However, when you live in a smaller town, um, It's not uncommon for either police or historical societies to bring you human remains, right?

Or what they do is they bring you remains and they want to know if it's human, right? and there's very few people who actually have that skill set where you can give them a chunk of bone and they can definitively say like, this is human or this is not human. And, I'm one of those people. So even though that's not my real like area of research interest.

I do teach a class on human osteology and I can take a chunk of bone of almost any size and tell you whether or not it's human. And, so that happens to me all the time. Right. So, most of my job in this area is honestly to say, 'No, I'm sorry. That's a pig bone. No, I'm sorry. That's a cow femur.'

Right. But every once in a while, something will pop up where, you know, it's. It's more than that, right? Maybe about five years ago, there was a house that had burned down maybe 45 minutes outside of town. And, they didn't think that it was anything, but the guy who owned the house was missing for like three months after that.

And so they're like, look, can you just kind of come out and pick through the charred remains of this house? I, at the time, was teaching my osteology course, which is an upper-division anthropology course, where you teach students to identify little chunks of human bone, right? Which is mostly what you find.

And so, we packed up, we all packed up together and went out and started picking through this house, which, apparently, the gentleman who owned the house also had 19 cats. So, just because you hit bone doesn't mean you're actually hitting, you know, a Uh, human remains. Those could be the remains of one of, or more than one of the 19 cats that were trapped inside this house when it burned down.

We did actually eventually find his remains, and it wasn't me who found him. It was one of my undergraduates.

Abigail Zorn

Looking ahead what would you say are some of your personal/professional goals for exploring anthropology or the connection it has to fitness? Because I know I saw you competed in a strongman competition a couple of years ago.

Libby Cowgill

Oh wow, yeah, that was a long time ago. Yeah. Now, I'm basically just trying to hold on to all my joints, girl, to be honest. Like, don't, don't break your knees, you're 45, kid. Although, you know, that, that ties into, you know, the one class that I do teach at CrossFit Fringe is, uh, a CrossFit class for Masters athletes, and they are my joy, right?

So this is mostly people who are doing CrossFit past 65. When, again, I think there's a reason why this particular class speaks to me, is because as you get older, uh, people who are nonactive tend to get something called osteoporosis, right? So their bones tend to weaken with time, and we know that the main way that you can fight this is not by taking calcium, not by drinking milk, it is da da da da Lifting heavy objects and putting them down again.

Right? So stressing them just like muscles makes your bones stronger, right? So getting to teach these older people like how to safely be physically active Into their 60s and 70s is just a dream, right? And that all just dovetails you know, I don't think I would have been ever interested in this if I hadn't seen how incredibly massive Neanderthal bones actually get from their incredibly active lives, right?

We know that physical activity and this is another wonderful thing that comes out of anthropology, is that physical activity tends to really, really improve the way that you age, right? So when we look at hunters and gatherers or other extremely active populations across the globe, they don't. They live almost as long as we do, but what they don't seem to have is like this period of like, kind of sickness and frailty towards the end of their lives.

Mostly, uh, they live their lives and they go, go, go, and then they just drop dead one day, without kind of a period of illness and fragility towards the end of their life, right? And that's all, some of it's probably diet. Some of it's probably not eating Big Macs three times a week, but a lot of it is, these are people that walk six or seven miles a day all the way up through their 60s and 70s, right? So, just anthropology in general, not even my research has sort of informed, quite strongly, how I think about aging and how I think about what I want my future to look like. We have a lot of movies of, of ethnographies, which are - it can be either a book or a film where someone has sort of recorded indigenous people, often hunters and gatherers, and you'll see these people where their faces look like a normal face of, like, a 70-year-old.

And then below the neck, the guy's got, like, six-pack abs, like, he looks like Brad Pitt from the neck down, and you're like, how did this happen, right? Like, I mean, if you monitor, if you look at their body fat levels. In non-Western societies that kind of dreaded, like, getting a little chunkier as you age, that is not inevitable.

Abigail Zorn

Well, thank you so much for coming on the podcast. We really enjoyed having you.

Libby Cowgill

Happy to be here. It was fun.