S2 Ep1: if these bones could talk

[Intro music]

Tony Cohn: This is Sidedoor. A podcast from the Smithsonian with support from PRX. I'm Tony Cohn. One day this spring, I visited Kari Bruwelheide at the Smithsonian's National Museum of Natural History here in Washington D.C. She's one of the Smithsonian's leading anthropologists. She studies bones and figures out the stories that they have to tell.

[Ambience sounds]

Kari Bruwelheide: And we like to think of our work as not only being an advocate for the people who study, but as solving a mystery, telling the human stories.

TC: And we're with Kari to visit a man named Robert Kennicott, in the museum's new Objects of Wonder exhibit.

CB: And you know, when we started the project, I didn't even know who Kennicott was, which is the amazing thing because he did so much not just for the Smithsonian, but the work he did was responsible in part to our purchase of Alaska.

TC: Right.

CB: So this is Kennicott.

TC: Oh, there he is. Wow.

CB: His skeleton is in beautiful condition.

[Piano music]

TC: And oh yeah, Robert is dead. He has been for 151 years. He used to be one of the Smithsonian's collectors. But now, he's' actually part of an exhibit surrounded by whale earwax, gorilla skulls, and a lion shot by Teddy Roosevelt. His complete skeleton is on display at the place where we worked for all the world to see.

CB: It's laid out as if the person is lying on their back, a lot of times we get a question of why are his bones black? And that relates to his burial environment. He was in an iron coffin, and the iron...

TC: This time on Sidedoor, who is this dead man who's on public display at the Smithsonian? It's not like he's an ancient mummy. He's a modern person who didn't die that long ago. We have photos of him. He kinda looks like a cross between Johnny Depp and Daniel Boone. We have his journals, we even have his hair. But for someone that we know an awful lot about, there's this huge mystery around how he died. There was all kinds of speculation, but eventually, Kari and her partner Doug Owsley got involved to solve this very cold historical case. And just how much can we learn about the cause of death from the bones of someone who died during the American Civil War?

CB: The really cool thing about Kennicott is, he brought objects back to the Smithsonian that are in every department here at Natural History. So he didn't just collect birds' eggs. He collected birds, he collected all mammals. He even wrote down languages.

TC: But to finally understand Kennicott and death, you kind of have to know who he was in life.

[Bells ringing]

[Piano music]

Sandy Schlachtmeyer: He was actually a Smithsonian scientist. He didn't start this way, obviously.

TC: This is Sandy Schlachtmeyer.

SS: And I wrote the book "A Death Decoded" about Robert Kennicott and the Alaska telegraph.

TC: Kennicott grew up chasing frogs, snakes, and birds outside of his family's ten-room log cabin out in the wild frontier of what is now suburban Chicago, where I'm also from. His father, Old Doc Kennicott, naturally, was a doctor, but also the editor of Prairie Farmer Magazine, and he ran the area plant nursery and hosted intellectual conversations. Young Robert preferred his time outside but did the jobs that his dad hooked him up with.

SS: His father, who was also a very educated and studied man introduced him to the various scientists in the Midwest. So he, Robert, studied with a bird expert in Racine, Wisconsin and he studied with an insect expert in Indiana, so he had all this background and these people you know, they knew somebody who knew somebody who knew somebody, and eventually, Kennicott had letters of introduction to Baird as the scientist at the scientific place.

TC: That's Spencer Baird. He was the Smithsonian's first curator, and was working to illustrate the national history of North America at a time when scientists really didn't know much about what was west of the Mississippi River. But Kennicott's earliest work at the Smithsonian is happening years before Charles Darwin published his big shake-up of biology, on the origin of the species in 1859. So, the study and understanding of animals, pretty much all of biology involved a lot of killing and dissecting.

TC: So Kennicott shows up to the Smithsonian with a bag full of spiders and frogs and deer.

SS: Yes, or something, yes, squirrels, whatever.

TC: And what happens?

SS: He is taken on a scientist here and given various specimens to look at, and says, tell me about this specimen, and then he would take it apart bit by bit, and record all the intricacies of it. And that was the kind of research that the Smithsonian did here in Washington.

TC: While Kennicott was here in Washington, he fell in with a group of scientists who spent all winter living in the Smithsonian castle. Okay for a mental picture, it's a literal castle but it's made of red sandstone. It has three towers, one of which is 145 feet tall. On the main floor was the original Smithsonian museum, where the public could visit. And upstairs was where all the science work happened. They worked diligently all day but, at night, like any group of friends, they liked to blow off some steam.

Pam Henson: They drank ale, they ate oysters, and then they played tag in the evenings after they had a beer or two. They did sack races down the hallways.

TC: This is Pam Henson. She's the historian for the history of the Smithsonian Institution.

PH: But it's just a group of fun young guys who are hanging out.

TC: And what do fun young guys do? Obviously, they make up a nickname for themselves.

PH: And they named themselves the Megatherium Club, after this extinct giant sloth that had recently been discovered in South America.

TC: An extinct, giant sloth the size of an elephant? Seriously guys, this was a real thing, google it.

PH: And they made up a sound that it would make. How how!

[TC Laughing]

PH: And they would use that between each other. That was sort of their secret call.

TC: How, how! How how! How how!

PH: And they talked about it being this animal that moves slowly but stealthy, and that that's what they were all like, in terms of capturing American natural history, but they mostly had a lot of fun.

[Music ends]

PH: And worst of all, Joseph Henry lived in the East End with his family, which included three daughters who were about the same age as these young fellows.

TC: Joseph Henry was the first secretary of the Smithsonian. Basically, he’s the big boss.

PH: And they would drink some ale and they would stand under the window and serenade the Henry daughters. Secretary Henry was quite somber and he did not approve.

TC: And it seems that Kennicott didn't stop at attempts to woo is boss's daughters by song. While Pam was perusing through the Smithsonian's archives she found an interesting historical note.

PH: There's also this mysterious valentine that was written to Mary Henry, Henry's daughter. And if you compare Kennicott's formal writing with the writing on the valentine which is unsigned, it is most likely Kennicott.

TC: And what does it say?

PH: Oh, it's very romantic, how wonderful she is.

TC: Tell me more.

[Music comes in here]

PH: It says to Mary Henry, or where a bird that could sing all day, I would fly to her bower to carol my jay, or where I a breath of soft-scented air, I would waft my sweetness to her bower so fair.

TC: Nobody's' going to confuse Kennicott for Walt Whitman, but you get the idea. He likes her.

PH: ...Joyously bright. I would kiss from her cheek every envious tear, and guard her kind bosom from sorrow and fear. Valentine.

TC: Whoo! Whoo, Pam, wow.

PH: You can see why Joseph Henry's not approving.

TC: But Smithsonian's secretary Joseph Henry didn't have much to worry about from Kennicott's romantic intentions. Because in 1859, the naturalist received a three year assignment about as far from Henry's daughter as possible – Alaska. And that's when Kennicott's career really takes off.

[Music swells, and then ends]

TC: Robert Kennicott actually went to Alaska twice – once in 1859, and once again in 1865. For brevity's sake, we'll largely skip the first expedition. But for some quick highlights, we go back to our friend Sandy Schlachtmeyer.

SS: Baird had the idea of examining the inland America.

TC: That is the same Spencer Baird who helped bring Kennicott to the Smithsonian a few years earlier. Okay also a quick aside, there was a broader political context for the Smithsonian's Alaskan explorations. Alaska was owned by Russia at the time, and the Russians, they wanted to get rid of it. But with the civil war raging in the early 1860s, the US was not in any kind of position to acquire a huge new territory. So the decision to send Kennicott to explore Alaska was as much as a field trip as it may sound today.

TC: Before that expedition, what did the Smithsonian know about that Russian-held territory?

SS: Zero. That's not quite true. I'm being a little flippant. There had been other expeditions to Alaska on the coast, but nobody had done the inland aspect.

TC: So on the first trip, Kennicott went across the heart of North America to Alaska's interior. And over the course of the three year expedition, he collected 282 birds, 230 various mammals, a 151 fish, as well as native Alaskan clothing. He also documented the languages of locals he met along the way.

TC: So if Kennicott goes to Alaska and finds a bear, how is he going to get that bear back from Alaska, all the way to Washington D.C. in the 19th century?

SS: Well first you select a smaller example but it was not impossible. We tend to think of our ways of doing things and forget that they were fairly sophisticated, and got things moving around as well. It was the fur traders who had ways of using the waterways and could get the stuff back. It would have to be preserved of course, you'd have to have killed it and preserved it in some way, but after that, you can get it back.

TC: A few years later in 1865, Western Union proposed another expedition to Alaska, which was still part of Russia at the time to plan the telegraph line that would go from San Francisco, up the North American West Coast, through Alaska, across the Bering Strait, across all of Russia, and finally into Europe. And when they started asking around about who knows anything about Russian America, of course, Kennicott's name popped up. So Kennicott signed up to be the Western Union expedition scientist, partly because he knew Alaska and partly because he wanted to keep doing what he did best – collecting, and studying plants and animals and people all in the name of science. But this expedition would be very different from the first one.

SS: They got there in September. He died in May.

TC: Oh, that's not very long.

SS: That's not very long.

TC: And how long was he when he died?

SS: 30.

TC: 30?

SS: 30.

TC: Where did Kennicott die? Would you mind describing that scene for us?

[Music in]

SS: Kennicott died at a very, very small Russian fort called Nulato on the Yukon River, and they were in the middle of nowhere. Really nowhere. The maps that they had at the time marked the whole area unexplored. The river was unexplored, the land was unexplored, nobody knew anything about where they were.

TC: Robert Kennicott died on May 13, 1866 in literally one of the most remote places imaginable at the time. And since Kennicott had been since a star for his first Alaskan voyage, his death received a lot of notice, and speculation.

SS: The major rumor was that he had committed suicide. They called it disease of the heart which was kind of one of those blanket phrases that would cover almost anything that you didn't really want to talk about. The method for suicide that everybody thought he had available to him was strychnine (?) 10:54 The men around him all knew that he had a smile vile of strychnine on his person and when they didn't find it after he died, they decided that he had taken it and thrown the vial into the river and committed suicide, but that was because they couldn't think of any other possible thing, because nobody ever thought of Kennicott as being ill, so without any kind of medical history, if you die, suicide is a possibility.

TC: With his death still shrouded in mystery, his body was shipped to his family's home in Glenview, Illinois. Kennicott was dead and nobody really knew why. And that's basically where the story sat for the next 140 years. And since Kennicott's story waited 140 years, we can take 30 more seconds for a quick break.

[BREAK]

[Bright sound of bells]

TC: To the people who knew Robert Kennicott best, the rumors of suicide never really rang true.

Steve Swanson: I'm Steve Swanson, and I'm director of The Grove, national historical landmark.

TC: The Grove is the Kennicott family's historic homestead. It's still maintained as it was during Kennicott's time growing up there in the 1830's.

SSw: I've been working here for 38 years. And I retire in 2 months.

TC: Swanson is possibly the world's biggest Kennicott's buff.

SSw: I had read all of his letters and journals and field notes, and yeah there's times where he was depressed, a long way to travel to Alaska. He probably had a long time to think about things, and so I just didn't see him as committing suicide.

TC: Swanson says that Kennicott does have a certain history of, it's not quite depression, but rather what they called back in the mid 1800's, the blues.

SSw: It was depression from disappointment. You know they had a little steamship they were gonna use to go up the Yukon River, and when it arrived in what is now Alaska, they had a part for the boiler that had been left on the dock in San Francisco, so he writes, oh he's got the blues from that. And then I think, when you're up near the Arctic Circle in winter, there's not a lot of daylight, not a lot of things to do. So I think with time on your hands, I think he was already riding that. He was riding that, and he said, I have the blues.

TC: Swanson spoke with Sidedoor producer Justin O'Neill.

Justin O'Neill: Were other Kennicotts afflicted with the blues also?

SSw: No, but I think there were tendencies in the letters for them to say that they had a lot of time on their hands at times, or the house was so cold they couldn't get out of bed and they had the blues. But clinically, I don't know what that means other than to me, it's just open, honest feelings they were putting into their letters. But when you read that in lots and lots of letters, and we have 28,000 pages of letters from this family.

JO: Wow.

SSw: It seems to be more of a trend.

JO: And did they literally use the term the blues?

SSw: Yeah, they said they either had the blues or they were melancholy. There's probably 20 some terms they use and all kind of had the same general meaning, I would say.

TC: So Kennicott did have the blues. And the blues is not a medical diagnosis, but there is good reason to think that Kennicott may have drank the strychnine.

Doug Owsley: Sometimes, there are medicines today we would not think of them as medicines. We'd think of them as very toxic substances. And strychnine is one of those and certainly, you don't hear so much about individuals committing suicide by strychnine, but that was more common in the past.

TC: This is Doug Owsley, who is a forensic anthropologist at the Smithsonian's National Museum of Natural History.

[BONES theme music]

TC: If you've ever watched the TV show Bones, Owsley’s job is basically the same. Like in the show Bones, Owsley works at a research institution. It's called the Jeffersonian in the show, instead of the Smithsonian, but he also offers scientific expertise on criminal investigations.

[Various pieces of tape from BONES episodes]

TC: Owsley was the guy who was called in to identify victims at the Pentagon on September 11. He was part of the Jeffrey Dahmer cannibalism case. And he was involved in the investigation in Waco, Texas, after the standoff between the Branch Davidians and the FBI turned violent. Owsley and his team were called in to study the remains of Robert Kennicott by Steve Swanson back at the Grove.

SSw: And he talked about the family, he talked about this mystery, and wanted to know if through our forensic science, if we can really help resolve it.

TC: Owsley and his team dug up Kennicott's coffin and brought him to their labs here in the Smithsonian. They were eager to test his remains for the much debated missing vial of strychnine, that people thought Kennicott drank to kill himself. Kari Bruwelheide 04:13, Owsley's partner explains.

CB: He was known to have carried a bottle of strychnine, a personal bottle, think of a very small, tiny vile.

TC: Why?

CB: Well that was the question that we wanted to ask. Strychnine is used for collection purposes, to poison animals before you collect them. It's also used as a pesticide to deter deterioration of animal hides to keep insects away, but it was also used during that time for medicinal purposes.

TC: This is where Owsley and Bruwelheide investigation really starts to put the pieces together.

Owsley: It's a very harsh way to die in the sense that what strychnine does, is causes the muscles to contract violently, and it causes them to go into this extreme convulsion, so much so that ultimately, in its final state, you're basically arched back, with the body supported by the back of the head and by the heels, and then it relaxes, then it contracts again so it's this periodicity that becomes stronger and stronger, until ultimately, you just can't breathe and you suffocate. For one thing we know through the testing of the toxicology that he had strychnine in him. We also know that he has a fair amount of strychnine in him, but the scene where the body was found, one of the things was a very peaceful, calm situation. He had his arms on his chest, he was lying there very peacefully, he had a broad brim, black felt hat, where the brim was just resting on the top of his forehead. If you'd had any type of convulsions on the back of the Yukon River, the sand, the scene would have been greatly disturbed and yet you've got this very peaceful death scene. That right there, that rules out strychnine.

TC: So despite all speculation, Kennicott didn't die from strychnine.

TC: Okay, the 10 million dollar question. Whodunnit, or rather, howdunit, right, like how did Robert Kennicott die?

A: It took years of analysis. It took lots of discussion on how to interpret the toxicology results, it took all these lines of evidence to come to the conclusion that this firmly is not suicide by taking strychnine. That could be ruled out. Strychnine there, but it does not contribute as the principal cause of death. Other things that were there include mercury and arsenic, and we can explain that in terms of either medicines he was taking or accidental, inadvertent exposure from handling certain types of toxic substances that a naturalist would handle in preserving skins for example.

TC: So the toxins that Kennicott encountered in his work didn't' kill him.

A: But the conclusion came about really from the evidence of fainting spells the man had, and these fainting spells are something that are going to indicate a problem of the heart, and Sandy –

TC: That's Sandy Schlachtmeyer. We met her earlier. She wrote the book on Kennicott's Alaskan adventures.

A: Sandy, through her records, was able to document one clear, classic episode of a fainting spell where basically you have a short-term stop of the heart, not enough blood to the brain and essentially you lose your posture and you lose consciousness and then the body, given a little bit of time will recover. And she was also able to document one that was perhaps not a severe, but essentially the same thing. Then you start looking at things in terms of the heart that basically could cause cardiac arrest.

TC: Because he died so remotely, Kennicott never had a proper autopsy. Even though he died when he was just 30, Kennicott had heart problems.

A: Another possibility is just some sort of arrhythmia that ultimately, he has a cardiac arrest and he doesn't get going again. We're always cautious but we felt that the firm evidence in this case was a natural case of death.

TC: Even though Kennicott died just after the American Civil War, it's amazing to think that just through studying the chemicals in his own bones, Owsley and Bruwelheide can pinpoint a cause of death that was unknown to doctors and scientists in his own time.

A: We're storytellers, but we're all about facts. We're following the evidence and we're going through the facts. And it's just fascinating. We can provide details about individuals for which there is no written record, or we can provide in the case of historic individuals, we can have questions about them that we can fill in details about their life. And that's very, that's very satisfying when you look at it in terms of asking the question, who are you? Who are you and what was your life like? I think that's part of our American story and we get excited about that.

TC: After all the work put in by the Smithsonian in investigating Kennicott's death, instead of returning him to the Grove, Swanson and the Kennicott family decided that Robert would be very pleased to stay where he lived his life – on the National Mall, in the National Museum of Natural History. Just last year in 2016, they officially signed Kennicott over the Smithsonian. Here's Steve Swanson from the Grove.

SSw: And now that Kennicott is in an exhibit at the Smithsonian, I think he would believe he came full circle. All of us who used to call this whole endeavor, collecting the collector.

[Music in]

SSw: He was one of the greatest collectors the Smithsonian had, and now his skeleton has been collected and catalogued and displayed, and what better thing for someone who was the founder of museums and just believed in the Smithsonian? So I think he really would be smiling, and he's got a really great full set of teeth to smile with, the skeleton's laying there, so I feel like he would really be pleased where he's ended up.

[Music swells]

TC: You've been listening to Sidedoor, a podcast from the Smithsonian with help from PRX. And as you know, we're a pretty new podcast. So if you've enjoyed listening, please leave us a review on Apple

Podcasts, which is pretty much the podcast equivalent of a hug, or you can just tell people about us – call your mom, dad, sister, chiropractor, whoever, and say, hey, Sidedoor is an amazing podcast you should definitely listen. Our theme song and some musical selections are by Breakmaster Cylinder. Other music is by Podington Bear. Sidedoor is supported in part by the Alfred P. Sloan Foundation, enhancing public understanding of science, technology, and economic performance. More at sloan.org. Our production team is Justin O'Neill, Stacia Brown, Jason Orfanon, Gabe Kosowitz, Jess Sadeq, Casey McAdams, John Barthe, Genevieve Sponsler, Barbara Reem, Elizabeth Pilger, and Carley Lamke. I'm your host, Tony Cohn. Thanks for listening.

[Music out]