

Season 9, Episode 7: The Funk List – Final Transcription

Lizzie Peabody: This is Sidedoor, a podcast from the Smithsonian with support from PRX. I'm Lizzie Peabody.

[MUSIC]

Lizzie Peabody: One day, Tiana Curry was scanning through some spreadsheets at the Smithsonian.

Tiana Curry: This was, like, my junior year, my first internship.

Lizzie Peabody: Tiana is now a grad student at the University of Southern California. But back in 2019, she was interning at the Smithsonian's Data Science Lab. And it was while she was scrolling through data from the botany collections that something caught her eye.

[MUSIC]

Lizzie Peabody: She was looking at the collections of Charles Walcott, a scientist and former secretary of the Smithsonian. In the early 1900s, he'd traveled all over the country, doing research and collecting various specimens, which were then cataloged with date and location. But as Tiana looked through the dates on Walcott's discoveries ...

Tiana Curry: There were specimens recorded as being collected after Charles Walcott passed away.

Lizzie Peabody: Wait. Specimens with his name on them?

Tiana Curry: Yeah.

Lizzie Peabody: Like, a ghost botanist?

Tiana Curry: Exactly.

Lizzie Peabody: So, what did you make of it?

Tiana Curry: I mean, the ghost researcher did cross my mind.

[MUSIC]

Lizzie Peabody: This would have been a pretty prolific ghost. There were several collections attributed to Charles Walcott after his death in 1927. Tiana racked her brain playing out the

various scenarios. Did he have a son with the same name? Was there another Charles Walcott doing research at this time?

Tiana Curry: All these different scenarios went into my head.

Lizzie Peabody: So, Tiana did what any intern probably would have done at this point. She went to her supervisor.

[MUSIC]

Rebecca Dikow: So, Tiana and I together actually pulled up the images for some of those specimens.

Lizzie Peabody: This is Rebecca Dikow, a research data scientist at the Smithsonian Data Science Lab and Tiana's supervisor at the time. She says the plant specimens that Walcott allegedly collected from beyond the grave were all flowers. Pictures of them had been scanned and uploaded, so she and Tiana could look them up right there on the computer.

Rebecca Dikow: And in the lower right-hand corner, there's usually a label that says who collected the specimen, where it was collected, and the scientific name for the specimen.

Lizzie Peabody: As they looked closer at the name on the piece of paper ...

Tiana Curry: We noticed that, for the specimens that were collected once he passed away, the name that was written as the collector was Mrs. Charles Walcott.

[MUSIC]

Rebecca Dikow: So, we definitely saw that "Mrs." really clear.

Lizzie Peabody: Not a ghost botanist. A real botanist. Charles Walcott's wife, Mary Vaux Walcott. She had traveled the country with her husband, collecting and cataloging plant specimens. But, now, he was getting credit for her discoveries even though he was dead. The nerve.

[MUSIC]

Lizzie Peabody: If you look at the historical record, it can seem like there weren't many women scientists before the 1960s. But that couldn't be further from the truth. The problem is that their contributions haven't always been recorded. And, sometimes, like with Mary Walcott, they were recorded incorrectly, often completely unintentionally.

Rebecca Dikow: And it could happen for many reasons. So, I think, in this case, what happened was the handwriting on those labels was transcribed into text, typed, and then put into the database without the "Mrs." label.

Tiana Curry: We're taking it from a written form to computerized, digitized. And so, anytime there's a transfer of that information, there's a potential for something to be left off.

[MUSIC]

Lizzie Peabody: But the things that get left off add up and disproportionately impact women. But how? And what can be done about it?

[MUSIC]

Lizzie Peabody: So, this time on Sidedoor: the researchers and data scientists who are working to bring the accomplishments of women scientists back to the historical record before it's too late and how artificial intelligence could amplify the mistakes already made or help us correct them.

[MUSIC]

Lizzie Peabody: That's coming up after the break.

[MUSIC]

Lizzie Peabody: Let's say you're hosting brunch this weekend, a fancy-pants one, and you want to know how to make a bellini. What do you do? You Google it, right? Or you ask Siri.

Kelly Doyle Kim: Hey, Siri. How do I make a bellini?

Siri: Here's an answer from Wikipedia. A bellini is made with one part prosecco and five parts fresh peach puree. Pour peach puree into chilled glass. Add sparkling wine. Stir gently.

Lizzie Peabody: That's Siri. (Sorry. Podcaster joke). And the person asking Siri for a tasty cocktail recipe is Kelly Doyle Kim, Open Knowledge coordinator for the Smithsonian American Women's History Museum and, basically, our in-house Wikipedia expert. And while your takeaway from Siri's answer might be "What the heck am I doing right now? I should have a delicious bellini in my hand!", well, Kelly is more interested in where the answer came from: Wikipedia.

[MUSIC]

Kelly Doyle Kim: So, if your kid is asking homework questions from Alexa, nine times out of 10, it's going to say, "According to Wikipedia, Harriet Tubman is X, Y, Z."

[MUSIC]

Lizzie Peabody: If you don't know Wikipedia, it's a free online encyclopedia and one of the most visited websites in the world. It's got so much information that many search engines go to it first when you search for something online or yell a question at Alexa. In short, Wikipedia is a big deal, which means not being on Wikipedia is also a big deal.

[MUSIC]

Kelly Doyle Kim: Absence on Wikipedia equals an absence on the rest of the digital historical record in many cases.

[MUSIC]

Lizzie Peabody: And this is a big problem for people of color, members of other marginalized communities, and women. Women make up roughly 50% of the world's population, but the percentage of Wikipedia articles about women is a lot smaller.

Kelly Doyle Kim: Nineteen percent.

Lizzie Peabody: Nineteen?

Kelly Doyle Kim: Nineteen. It breaks down to about 375,000 out of 1.9 million biographies on Wikipedia English.

Lizzie Peabody: Kelly says the problem is compounded because the Wikipedia articles about women tend to be really short.

Kelly Doyle Kim: What we call stubs. Maybe three sentences.

Lizzie Peabody: And on top of that ...

Kelly Doyle Kim: Women are faceless on Wikipedia.

Lizzie Peabody: Less than 20% of articles about women have pictures.

Kelly Doyle Kim: And we know from reader studies that Wikipedia articles with images are read and stayed on longer.

Lizzie Peabody: So, 80% of the 19% of articles about women are only a few sentences long and have no pictures, which makes them more likely to be deleted. Because when you see an article like that ...

Kelly Doyle Kim: Your gut reaction is to say, "I don't know if I should trust this."

Lizzie Peabody: Wow.

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Lizzie Peabody: When you're finished thinking "wow," you might start to think "Why? Why is there such a big gender gap on Wikipedia?" Well, there are a few reasons.

[MUSIC]

Lizzie Peabody: When sorting and classifying information to put online, you have to make a series of decisions. If you're an editor on Wikipedia—a Wikipedian like Kelly—every decision you make is guided by rules.

Kelly Doyle Kim: I find people are really surprised when I tell them we have things like conflict-of-interest policies, notability policies, things that make Wikipedia the capital T truth of the internet.

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Lizzie Peabody: I mean, Wikipedia has come a long way since it started in the early 2000s and my teachers would penalize me for citing it in a paper. Back then, pretty much anyone could write anything on Wikipedia. So, to get credibility, Wikipedia created rules. And these rules are well-intentioned. I mean, if you go to Wikipedia to learn about how a vaccine works, you want reliable information based on facts, not an opinion from Uncle Mike's blog.

[MUSIC]

Lizzie Peabody: But even well-intended rules can cause problems. And there's one rule in particular that makes it harder for women and minorities to get on the site, something called the "notability standard," which means ...

Kelly Doyle Kim: Basically, that it deserves inclusion, it has national or international prominence, it's something that's foundational to human history is a good way to think about it.

Lizzie Peabody: So, if you're a person, you need to meet certain criteria to be considered "notable" by Wikipedia's notability standards. Like, you need to appear in at least three "well-sourced" articles on reputable websites. That means no oral histories. Your softball team's bio page is not going to work. That company newsletter? Forget about it. Think about the publications you're likely to trust: The New York Times, National Geographic, Scientific American. You essentially have to appear in something of this caliber.

Lizzie Peabody: Am I notable?

Kelly Doyle Kim: I don't know. I'd need to Google you more. But people ask me all the time at dinner parties and things, "Oh. Like, am I notable? I did this thing and I have this band in college." And then, I have to say, "No. I'm sorry. I'm going to go to the restroom."

Lizzie Peabody: Oh, my gosh. You have to be the person who runs around telling people they're not notable.

Kelly Doyle Kim: I know. It's really tricky.

Lizzie Peabody: For the record, I am not notable, which makes sense, honestly. But there are a lot of women who really should be notable, according to Wikipedia, and aren't. Take, for example, Donna Strickland.

[MUSIC]

Donna Strickland: They did call at 4:48 AM and they asked for Prof. Strickland. So, then, they said to me, "This is an important call from Sweden. You must stay on the line. Please stay on the line."

Lizzie Peabody: In 2018, Donna Strickland became the third woman to win the Nobel Prize in physics, the same prize Albert Einstein won in the 1920s. But if you had opened up Wikipedia on the morning Donna got that call from Sweden, you would not have found her name. Even though she won the Nobel Prize, she wasn't considered "notable" in the eyes of Wikipedia. It's sort of like not being considered an athlete until you win a gold medal in the Olympics.

Kelly Doyle Kim: Exactly. And her article had been written and removed many times because it didn't meet the notability threshold. So, she met the notability threshold once she was a Nobel Prize winner.

Lizzie Peabody: There's sort of a catch .22 here with the notability standard. You have to have had stuff written about you to have stuff written about you. And women have, historically, had less stuff written about them, especially women scientists. So, even though Wikipedia treats all information as neutral, it ends up replicating some of these historical biases in the record. So, if you're asking Siri, Googling, or scanning Wikipedia, it can seem like women researchers don't exist en masse until the 1960s. But if you go looking for women scientists offline, like in the Smithsonian's archives ...

Liz Harmon: They're everywhere.

Lizzie Peabody: This is Liz Harmon, digital curator at the Smithsonian Libraries and Archives.

Liz Harmon: Once you start looking, once you start digging there, you find women's history everywhere. Literally. Because women have been working at the Smithsonian since the 19th century. So, their stories are in our collections. They're just harder to find.

[MUSIC]

Lizzie Peabody: There are a bunch of reasons why it's harder to find information about women scientists in the federal archives. One reason is a Great Depression–era policy called the Economy Act of 1932. In it, there's a clause ...

Liz Harmon: ...that's been referenced as the married workers clause. And, basically, what this said is that the federal government, in order to kind of achieve staff reductions, if there were spouses who were married, one of them would need to be terminated.

Rebecca Dikow: The one that was being paid less would be laid off. I think, most commonly, that was the woman.

Lizzie Peabody: Rebecca Dikow again.

Rebecca Dikow: We definitely have examples of that at the Smithsonian.

Lizzie Peabody: For instance, one entomologist named Doris Holmes Blake.

Liz Harmon: A colleague of mine, while doing research in our collections, found a letter that Doris Holmes Blake had written to the Secretary of Agriculture, protesting her dismissal as part of this policy. And it's a really powerful letter.

[MUSIC]

Lizzie Peabody: She writes ...

Speaker 8: I am one of the married women in your department who has, today, received notice of dismissal. I am 41 years old, am college-trained with a master's degree from Radcliffe College, am Phi Beta Kappa, and all the other fixings, and have been in the Bureau of Entomology since 1919 (14 years). I am one of the few women who has ever been able to work up to being an assistant entomologist in this Bureau. I have three papers in the process of being printed. My own mother and father have been dependent on my earnings for the last three years since my father's stroke. Now, what would you think if this were your situation? Sincerely, D.H.B., Assistant Entomologist. June 26, 1933.

[MUSIC]

Liz Harmon: But she loses her job anyway.

[MUSIC]

Lizzie Peabody: Doris Holmes Blake kept working at the Smithsonian. But off the books.

Rebecca Dikow: For the rest of her career for the Smithsonian and described more than 800 species and wrote more than a hundred papers.

Lizzie Peabody: Wow.

Liz Harmon: As a volunteer.

Lizzie Peabody: That's a lot of work to do as a volunteer.

Liz Harmon: A huge amount of work.

Lizzie Peabody: But even if a woman researcher had a paid position, it's hard to find information about her in the archive, because of the problem of women's names.

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Lizzie Peabody: A woman scientist's name might appear in a number of different ways. As her husband's name with "Mrs." in front. Maybe by both her maiden name and, later, her married name. Or, possibly, just her initials.

Liz Harmon: And this is the challenge because, sometimes, their full name isn't in there. Also, as we digitize records, it's not always clear if a name is denoting a woman or a man.

[MUSIC]

Lizzie Peabody: Inside the Smithsonian Libraries and Archives, Liz shows me how women scientists can hide in plain sight within the historical record. She grabs a big box of documents, drops it on her desk, untwists the twine holding it shut, and pulls out a folder.

Liz Harmon: So, the first type of record I want to show you, these are salary roles. So, these tell you how much money someone made.

Lizzie Peabody: Oh, wow.

Liz Harmon: And you can see—. Okay. So, let's go to the Division of Marine Invertebrates. So, you can see: Assistant Curator, M. J. Rathbun.

Alexa: Mary Jane Rathbun was an American zoologist who specialized in crustaceans. She worked at the Smithsonian Institution from 1884 until her death. She described more than a thousand new species and subspecies and many higher taxa.

Liz Harmon: If we didn't know that was Mary Jane, we'd have no idea that was a woman.

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Lizzie Peabody: Then, there was the problem of titles.

[MUSIC]

Lizzie Peabody: Often, women in the 1800s and early 1900s didn't have job titles that matched the work they were doing. A man may be called a curator while a woman doing the same work could be called a ...

Tiana Curry: ... Clerk, a volunteer, an assistant.

Lizzie Peabody: Former intern Tiana Curry again.

Tiana Curry: These women would be overlooked if you are just searching for researchers and scientists.

Lizzie Peabody: Liz pulls up another box and pulls out another folder. This one is full of what are called "Curator's Annual Reports."

Liz Harmon: These are amazing.

Lizzie Peabody: These narrative reports describe what everyone in each department was doing for the past year. So, you might find that a woman was working as a volunteer ...

Liz Harmon: But they traveled to, say, Panama, and they did additional research. They brought back a ton of specimens. And then, they worked with another illustrator who helped them create an exhibition for the newly-opened Natural History Museum, you know.

Lizzie Peabody: Oh, my gosh. It's like the department Christmas card.

Liz Harmon: Exactly. Well, and you also find Christmas cards in these records ...

Lizzie Peabody: What?

Liz Harmon: ...which is the cool thing.

[MUSIC]

Lizzie Peabody: This is one box of thousands of boxes, almost all filled with folders filled with reports, postcards, handwritten letters, telegrams, Christmas cards, payrolls, phone books. Finding women researchers in the past is like looking for a needle in a haystack. Or a needle in a needlestack when the one needle you want looks a lot like the other needles but you don't

know which needle you're looking for until you find it. And it's not called a needle. Anyway, you get my point. It's the sort of work a historian would be doing if she were researching and writing a book. But Liz and the team aren't writing a book. They're making something even bigger and arguably more powerful, something they call the "Spreadsheet of Awesomeness."

[MUSIC]

Lizzie Peabody: That's coming up after the break.

[MUSIC]

Lizzie Peabody: Part two of our story begins with a Smithsonian employee named Vicki Funk.

Siri: Vicki Ann Funk was an American botanist and curator at the Smithsonian's National Museum of Natural History, known for her work collecting plants in many parts of the world, as well as her synthetic work on phylogenetics and biogeography.

Lizzie Peabody: Thanks, Siri. And the reason Siri can tell me who Vicki Funk is is because of another Smithsonian employee, someone named ...

Irish Siri: Effie Kapsalis was an American open access advocate known for work related to digital programs and initiatives, including those advanced at the Smithsonian Institution.

Lizzie Peabody: Thanks, Irish Siri. Anyway, back in 2014, Effie Kapsalis was working on bringing Smithsonian digital collections to the internet and she realized then what has become more obvious to us today: that if you're not on Wikipedia, you're essentially invisible online. And, well, there were a lot of Smithsonian women researchers not on Wikipedia. One of them was her colleague, Vicki Funk. And knowing how important Vicki's research was ...

Liz Harmon: Effie had added Vicki's name to what's called a work list for Wikipedians, so they could create a profile for Vicki on Wikipedia. And then, Vicki saw this and said, "This is so cool."

Lizzie Peabody: This is digital curator Liz Harmon again. She says, when Vicki Funk saw her work and accomplishments in an online encyclopedia, she was jazzed.

Liz Harmon: Then, they kind of hatched this plan.

[MUSIC]

Liz Harmon: Okay. It's made at least one scientist very excited to have their profile on Wikipedia. How can we create more? And not just to make people excited, right? But to have that kind of more women represented, especially women in science, on Wikipedia.

Lizzie Peabody: Vicki and Effie started asking around, going to different Smithsonian museums, Natural History, American History, trying to create a list of Smithsonian women researchers who deserved to be on Wikipedia.

Liz Harmon: They talked to people they knew. They said, “Who do you remember? Who were the first women that worked in your department at the Natural History Museum? Who are women that you remember working here 20 years ago?” And they started to create a list.

Lizzie Peabody: The list grew. Five names here. Two there. Three more somewhere else. And before long, it was so long they had to put someone in charge of it.

[MUSIC]

Lizzie Peabody: That is your whole job?

Liz Harmon: Yeah. That's my whole job.

Lizzie Peabody: Yup. That person was Liz Harmon. And she's still at it. Although the Spreadsheet of Awesomeness is now called The Funk List, in honor of the late Vicki Funk.

Liz Harmon: The kind of information that's in our historical collections is not online yet. You can't just search for it. You need to use the kind of tools of a historian or a historical thinker to find them.

Lizzie Peabody: In other words, there's tons of information about women scientists in the Smithsonian archives, but someone has to excavate it by hand, digitize it, get it on the internet, and then write about it before it can make it on to Wikipedia. And this is not a simple problem to solve. Because it's one thing to know there's information about women researchers in our archives, but, as we already discovered, it's quite another thing to find it. Liz uses her research skills as a researcher to identify women scientists missing from Wikipedia. But she needs help scouring all the digital records to find more details about these scientists. And that is where Rebecca Dikow and the Data Sciences Lab come into the picture.

Rebecca Dikow: We have so many million specimens and records here at the Smithsonian.

Lizzie Peabody: To search through all these millions of records and specimens, Rebecca uses artificial intelligence.

Rebecca Dikow: But we do need to be aware that any artificial intelligence algorithm will reflect our – the biases in the data that is used to train it.

[MUSIC]

Lizzie Peabody: Artificial intelligence like Google AI or ChatGPT learns about the world by scanning the Open Internet, which means it learns about the world the same way we do. And just keep in mind some of the terrible things you might have seen people write online. But even a site like Wikipedia, with its strict factual guidelines and content moderation, poses problems for AI.

Kelly Doyle Kim: So, the AI technology that's being used in something like ChatGPT is learning the white male voice, because that is the voice of Wikipedia.

Lizzie Peabody: Kelly Doyle Kim again.

Kelly Doyle Kim: Only one in 10 editors on Wikipedia English are women. And so, the voice of Wikipedia, the topics that are most well covered, frankly, are things that white Western men care about.

Lizzie Peabody: Things like sports, military history, video games, cryptocurrency.

Kelly Doyle Kim: All of these things are very complete on Wikipedia. And so, if ChatGPT is being trained on Wikipedia as it exists today, it exists in the male voice about typically what men care about.

Rebecca Dikow: That's one reason why we're building customized machine learning models.

Lizzie Peabody: Rebecca and the Smithsonian Data Science Lab actually build custom algorithms for AI that can avoid these sorts of biases and to create a process that doesn't accidentally erase women researchers, overlook them, or misattribute their work to their husbands. That way, what happened to Mary Vaux Walcott won't happen again.

Rebecca Dikow: So, Mr. And Mrs. John Smith, instead of being extracted as John Smith, we will extract the entire thing, the Mr. And Mrs. John Smith, because we want to have a record that was a spousal entity and not just a single person.

Lizzie Peabody: This process is still in early phases, but it's already showing results. Finding women researchers is just one of the steps. The ultimate goal is to get this information out into the world through Wikipedia.

Kelly Doyle Kim: To date, we've added over 1.8 million words about American women from Smithsonian collections to Wikipedia.

Lizzie Peabody: That's a lot of words.

Kelly Doyle Kim: It is a lot of words.

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Lizzie Peabody: The Smithsonian Institution was founded in 1846 to collect knowledge and then spread it to the general public. Kelly says, if you think about Wikipedia, its mission is pretty much the same.

Kelly Doyle Kim: The Smithsonian is free. Wikipedia is free. And the alignment is about the Smithsonian is for the increase in diffusion of knowledge. So, too, as Wikipedia. It's the concept of an equalizer in access to education and information. And I see these things as being twins in the modern digital era.

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Lizzie Peabody: This collaboration between the old analog museum and its new digital twin is vital, because, as Liz Harmon says, when it comes to women scientists in America, we're not just getting an incomplete picture but a wrong one.

Liz Harmon: I still feel that we are faced with this question over and over again. "Yeah. But there weren't that many women." Right? The bigger history is, really., about the history of science, which is men. It's not about women. And I think, when you're looking at our records, the lie of that is just so bold and so clear.

[MUSIC]

Lizzie Peabody: And, right now, with artificial intelligence getting more advanced every day, there's more pressure than ever to confront this lie and correct it. Because as smart as AI is, it can only build on what's already online. And in that way, it's still just a mirror of our society. The hard work of filling in the missing pieces of history, updating the digital record, and confronting our own societal biases, that one is on us.

[MUSIC]

Lizzie Peabody: You've been listening to Sidedoor, a podcast from the Smithsonian with support from PRX.

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Lizzie Peabody: To learn more about AI and how it learns from existing language on the internet, check out our episode "The Robot in the Mirror," about an artist who tried to evade racial biases in machine learning by training a chatbot using her own family's oral histories. We'll link to that in our newsletter. We'll also include more information about the Funk List and the work that the Smithsonian is doing with Wikipedia. You can subscribe at si.edu/Sidedoor.

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Lizzie Peabody: For help with this episode, we want to thank Tiana Curry, Rebecca Dikow, Liz Harmon, and Kelly Doyle Kim.

[MUSIC]

Lizzie Peabody: We want to acknowledge the role Vicki Funk played in advancing women scientists at the Smithsonian and her role in creating the aptly named Funk List. Vicki was an early advisor to the Smithsonian American Women's History Initiative before her death in 2019.

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Lizzie Peabody: We also want to acknowledge the contributions of Effie Kapsalis, who died in 2022. She was a leader in digital strategy and women's history at the Smithsonian and championed all women's history through her work with the Smithsonian American Women's History Initiative. Effie was instrumental in making Smithsonian women scientists and their work more visible by putting it online.

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Lizzie Peabody: Vicki and Effie's legacies endure in both the Funk List and the new Smithsonian American Women's History Museum.

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Lizzie Peabody: This episode is made possible with funds from the Smithsonian American Women's History Initiative, a program of the Smithsonian American Women's History Museum. To learn more, go to womenshistory.si.edu or join the conversation using the hashtag #SmithsonianWomensHistory on social media.

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Lizzie Peabody: Our podcast is produced by James Morrison and me, Lizzie Peabody. Our associate producer is Nathalie Boyd. Executive producer is Ann Conanan. Our editorial team is Jess Sadeq and Sharon Bryant. Tami O'Neill writes our newsletter. Episode artwork is by Dave Leonard. Fact-checking by Adam Bisno. Extra support comes from PRX. Our show is mixed by Tarek Fouda. Our theme song and episode music are by Breakmaster Cylinder.

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Lizzie Peabody: If you have a pitch for us, send us an email at sidedoor@si.edu. And if you want to sponsor our show, please email sponsorship@prx.org.

[MUSIC]

I'm your host, Lizzie Peabody. Thanks for listening.

[MUSIC]

Lizzie Peabody: Can Sidedoor be used as a source on Wikipedia?

Kelly Doyle Kim: Podcasts are tricky.

Lizzie Peabody: Nice dodge.