

Episode 33

Patrick: Or space apparently.

Ryan: Yeah, well we do space a lot.

Charlie: Yeah, we do space way too much.

Ryan: Yeah, let's let's get sexy Patrick.

Patrick: Okay.

Charlie: Space is very sexy.

Patrick: We'll try to get...

Ryan: Space is not sexy, space...

Charlie: Dude. Did you see the graphic I put up on our last show notes? That was awesome.

Ryan: As Bones says in the new Star Trek space is cold and disease wrapped in darkness and death or something like that.

Charlie: We live in space dude, we're on a spaceship right now orbiting the Sun.

Music

Announcer: Hello, and welcome to Science sort of.

Ryan: You're listening to Science sort of Episode 33. The show that brings science and things that are sort of science and things that wish they were science. And our theme this week: sex bugs and rock and roll. My name is Ryan. I'll be your host but I'm joined by two inestimable Paleo Pals. Moving from east to west, we're going to start with Patrick.

Patrick: Hola Paleo Pals and, and the Paleo Posse.

Ryan: The Paleo Posse. Yes. And way out west we have Charlie.

Charlie: Aloha Paleo Pals.

Ryan: A careful listener, knowing that I started with Patrick, would know the third Paleo Pal was Charlie and not Ben since I said going east or west. Think about that.

Charlie: I'm done thinking about it.

Ryan: Okay. We've got a great show for you this week. I think you guys are gonna like everything we've got to say. But the first thing we have to say to all y'all is what we're drinking and going from west to east, Charlie, what's in your glass tonight?

Charlie: I'm drinking a Primo lager and this has a long history that Primo lager dates back to 1898 in Honolulu Brewing Company and Malting Co started it. But they, they were bought out in 1997 by Papst and they no longer brewed anything until 2007. A decade later, Pabst reinvigorated it and now they're brewing again. And they have some acreage, actually, in Lanai where I'm staying so I'm excited about it. And it's, it's a strange lager because it actually has sugar cane in it. Normally beer isn't supposed to have sugar in it, but it's it's part of the island flavor, I guess. And it goes really well with salty foods like poke. So that's that.

Ryan: Nice little description there. I like that. That is, that, I guess we can tell definitively that it doesn't have live yeast because it still has sugar in it.

Charlie: Yeah, it's it definitely tastes like a lager. It's, it's not sweet. And that was, that was part of the goal, to taste like more high end lager.

Ryan: Cool. All right.

Charlie: Yeah, I guess before it tasted like a malt beverage back, back last decade.

Ryan: Yes, one of those Smirnoff ice things. Eahhhhhh.

Charlie: Yeah.

Ryan: No thank you. Patrick, how about you? What are you sipping on, sipping on tonight?

Patrick: Yeah. So I'm, I was out of reach last week because I was at a forensics chemistry conference. And so, sort of in honor that, I'm drinking the Undercover Investigation Shut-down Ale by Lagunitas Brewing Company. It's a bitter, a bitter ale. Not so dissimilar from an IPA. Really hoppy and got pretty high alcohol content, not for one of Ryan's beers, but for one of my beers. It's 9.75.

Ryan: Very cool.

Charlie: I've always tried to figure out what's underneath that confidential label.

Ryan: There's nothing there. So that's...

Charlie: They have something written there.

Patrick: That's the Censored one. This is a different one. This is... yeah.

Charlie: They have they have two different under two different beverages under wraps.

Patrick: Ah, I guess so. That one's just called Censored. And this one is the Undercover Investigation Shut-down ale.

Charlie: Cool.

Ryan: All right.

Charlie: I haven't tried that.

Patrick: It's a special, it's a limited release. So, better find it soon.

Charlie: All right, what are you drinking Ryan?

Ryan: Well, Charlie, you're drinking a little sweet, Patrick or drinking something a little bitter, so it's only appropriate that I have something a little sour. And I've got the Monks Cafe Flemish Sour Ale from Belgium.

Charlie: What makes it sour?

Ryan: They blend young and old beers to get this mildly sour ale. It's kind of just aged beer turning a little sour, almost kind of a vinegary sourness to it.

Charlie: Oh, it's like, it's on the turn.

Ryan: Like an apple cider tartness. I, it's one of my my favorite styles, it's kind of a popular beer right now. It has a lot of notes of cherry and things like a tart cherry sourness to it. I haven't had this specific one though. So we're, we're about to see I poured it in my, my a little bit nicer beer glass goblet, goblety thing. And this is nice. It's a little sweeter than some of the sour ales I like but it's it's lives up to the standard that I come to expect with a sour ale from the land of Belgania.

5:20

Patrick: Isn't it pronounced Belgina?

Ryan: Is it, whoa, hey, slow down. That sounds a little risqué.

Patrick: Speaking of a stiff drink.

Ryan: Our interview this week is with author Mary Roach.

Patrick: Author of *Stiff*.

Ryan: Author of *Stiff*, indeed. Let's let's get that started now.

Music

Ryan: I feel like I should give you a brief intro and I should tell the listeners that Mary Roach is the author of *Stiff: The Curious Lives of Human Cadavers*. *Spook: Science Tackles the Afterlife*, and most recently *Bonk: The Curious Coupling of*

Science and Sex. She also writes articles for *Salon*, *Wired*, *National Geographic*, *New Scientist* and the *New York Times Magazine*. And welcome to the show Mary.

Mary: Thanks.

Ryan: So one of the things I first wanted to just ask you about is when we were emailing back and forth trying to get this setup. You mentioned that this sounded like a cool show for you because the thing you do is also science writing sort of, so can you elaborate on that?

Mary: Yeah, science writing sort of. Well, for starters, I don't even have an undergraduate science degree. So that makes me unusual for science writers, and I mean, unusual as a science writer, and also it kind of limits me to the stuff that I could pick up on the fly. Biology is pretty safe. You're not going to find me writing about genetics anytime soon or particle physics. So that's kind of what I like.

Patrick: Those things are still science, come on.

Mary: It's, yeah, it's science, well it's the science that doesn't exclude a large segment of the population, that are...

Patrick: Right.

Mary: ... huh? And I'm kind of in the huh category. The people who you know, read the *New York Science Times* and *The New York Times Science Times* and you know, understand about half of it.

Charlie: But that's sometimes a really useful position because you can cut through the jargon and and ask the innocent questions and find out if the scientists actually knows what he or she is talking about.

Mary: Yeah, Yeah.

Charlie: Yes.

Mary: Right, exactly. But it's also I think, as a science writer, it's, it's a good position in that I identify with my audience. I mean, I'm starting out at the same level as my audience so I'm not likely to you know, wander off into something that's just way too abstract for anybody because I don't understand it either.

Patrick: All, right, it's, it's still easy to, once you, once you become familiar with the topic, it seems like it's just so easy to write things that, that other people don't understand where you're coming from because you're just so intimate with the research.

Mary: Yeah, I know, there's, there are science writing programs, well, there's one in Santa Cruz not far from where I live, where you, in order to get into the program. You need an advanced, I don't know, I think you may need a PhD maybe just need a Masters...

Ryan: I have a friend in the program right now and she got in with a Masters or a, no...

Mary: Masters, yeah.

Ryan: Yeah, so...

Mary: Yeah, but I actually think that makes it a little hard. Not only because you have to kind of dial yourself down when you're talking to a general audience, but it maybe it stops being interesting to you. Because when you, you know, the more you know about something, the deeper you get into it, and you know, you start heading into the molecular level, and then you leave everybody behind except your peers. So I like to think of it as a little bit of an advantage only, you know, in communicating with a broad audience. I mean, my books are popular with high school, kids, and so I'm, I'm hitting a pretty broad spectrum.

Ryan: Mmhmm. Do you ever, do you feel like you understand it by the time you're sitting down to write it? Or are there times where you feel, still feel like you're just quoting what the scientists told you on faith?

Mary: No, I can't, I can't do that. It doesn't, if I don't, if I don't understand it, I can't, I can't put it in. I just, if I, because if I, if I just stick a quote in without really understanding what they're talking about, then I just think I'll lose people. It's easy enough to lose people even when you understand it.

10:09

Ryan: Mmmhmmm.

Charlie: Right.

Mary: But when you do that, that mistake of just like, well, I'll just let the scientists say it. He seemed to say it clearly. I don't understand what he said, but maybe someone else will. You can't do that. So...

Patrick: Maybe they'll think I'm smart too.

Mary: What?

Patrick: Maybe they'll think I'm smart too?

Mary: Yeah, right. Exactly. Yeah. It's a nasty trick to play on your reader, just sort of throw in a quote that you, that you yourself don't even understand. But I understand the temptations sometimes. But I'm, frequently, I'll have to call people back and say, I'm really sorry, but you know how you went on that thing about you were talking about the hoo ha and the receptors, what was that about? Can we go over that again? And I often frequently say to people, pretend you're talking to a seventh grader. Pretend, imagine the time you're at a dinner party, the woman sitting, oh, I shouldn't say woman, that's sexist. The person sitting next to you works in marketing. And you have to make this person understand your job. Please talk to me like that.

Patrick: Now you know why scientists don't go to parties.

Mary: I know, I just want to slit their...

Ryan: Maybe you won't go to parties Patrick, but I was about to say that I understand exactly what she's talking about, talking to people in marketing...

Patrick: You're still young.

Ryan: Yeah, I guess so. I guess so. That is, that is something I kind of wanted to delve into a little bit deeper because I love, in your books, the way you interact with scientists. And what...

Mary: Uhhuh.

Ryan: Was that something you had to get used to coming from a strict writing background to...

Mary: Well, the, yeah...

Ryan: I mean, did you have trouble socializing with with these people that spend all day in the lab and generally you tend to tackle topics that most don't get a lot of press otherwise. So I feel like you'd be catching researchers who often don't talk to people outside their field, about their work.

Mary: Well, true. Yeah. And the great thing about that is that they're so excited that somebody actually wants to talk to them about what they do. Their wives don't want to hear about it, that's, people, you know, people sitting next to them on the plane don't want to hear about it, so they're, they're usually so excited that somebody is really interested in, enthusiastic about what they do that it's, it's actually really a pleasure because you're, you're both kind of enthusiastic about it. And, and you know, I only spend a couple of days with, with a researcher that I go to visit. And it's usually, I can't really think of a time when I was, you know, counting down the hours before I could get back on the plane. It's usually a really fun kind of collaboration with a, you know, with a few exceptions. I mean, sometimes there are just situations, like I don't know if you're familiar, in *Spook*, there's a researcher named Jerry Mayhew who has this plan to build, you know, he's actually a gynecologist, a professor of gynecology at Duke University. Really, really smart guy but with a background in consciousness theory. This is what he studied in, I guess as an undergrad anyway. So, we're talking, you know, preservation, you know, he's trying to prove that the soul has some sort of electromagnetic substance.

Ryan: Mmmhmmm.

Mary: Electric, so he's figured out a way to weigh a consciousness in a way gram sensitive scale and array of energy detectors. But we're going off into Einstein territory and I can't follow and he's incapable of talking on my level. And I wish I had, with me, this, my, my original note that I sent him. And then his reply, which was just this string of, you know, each word had at least six syllables, you know. Quantum entropy, mega-steady stable state, and then at the end, I'd be happy to discuss these issues with you further. Mwwwwhhaaa. So, my, my inclination is to sleep when I get an email like that, but I thought, no, no, I'm going to, I'm going to pursue this. And he was such an extreme that the interaction between me and him became the most interesting thing in the chapter. Me trying to understand what he's saying and him trying to explain the most basic theories of consciousness and how he's going to build this device and what it would entail. And I'm, I'm, you know, I have no background in particle physics or, or quantum mechanics or particle theory so you know, he's basically serving as a tutor and he's a terrible tutor because he can't bring it down. But, I'm, you know, I keep persisting and we, you know, it's just it's, it's a really fun chapter I think that could have been a train wreck. And partly, partly, it is the, the ridiculous chasm between him and me, and us struggling to understand each other. And him struggling not to let his annoyance show and his desperation at my stupidity.

15:00

Mary: So he, and I, when I turned the book in I thought, oh god at a certain point, I'm going to get an email from Jerry Mayhew, who, like 20 pages, letting me know how everything was wrong, that I said how I mis-represented him. But in fact he wrote this email that was, well, for, someone forwarded it to me and he said, Yes, I very much enjoyed Mary, wrote this chapter about me. I thought she did a wonderful job. And then it was, da, da, da, da, and then he said, my only, my only complaint was that she failed to grasp this very simple principle because and then this is like 20 law thing, incomprehensible, jargon filled, quantum mechanics babble. It's a very classic Jerry Mayhew email. Anyway, long story.

Ryan: That's, one of the things, one of the things we often talk about on this show, because we try to be science communicators to the public as well, is basically, whenever you're talking to somebody and their, their explanation involves the word

quantum, it's, you're kind of done, like...

Mary: Yeah, right...

Ryan: There's nowhere to go.

Mary: That's exactly...

Ryan: Because nobody understands quantum mechanics and anybody who claims to is probably lying or delusional, or...

Mary: Yeah, exactly...

Ryan: ...or a quantum physicist and should have a PhD.

Charlie: I've taken three quantum classes and the only way I'm ever comfortable talking about it is in mathematical equations. It's very difficult to put into words. So I think that's a big, big part of the problem.

Mary: Yeah, yeah. It was, it was a challenge, that chapter. I did, I enjoyed it, because it was one of those things where your inclination, again, is to just scrap the whole thing and then you sort of push through it and you end up being glad you did. But I, it will be interesting to see statistics on how many people made it through that three page, there's three pages there, where, I think I'm explaining it really simply, and clearly and it's really basic stuff. And, but most people are probably just flipping head to the end of chapter.

Ryan: I haven't read the book in a while because I just finished *Bonk*, so I'll have to go back and check that chapter out and I'll get back to you and let you know how I did.

Mary: Yeah, let me, definitely, let me know. Yeah.

Ryan: I might not be the target market, but I'll give it a shot.

Charlie: As a transition into *Bonk*, I wanted to know what motivates your choice of topics. I mean, death and sex aren't exactly the most...

Ryan: And after death...

Charlie: ...accessible topics to general public. Obviously use a lot of humor to great effect, but I was wondering what what motivates your choice of topics?

Mary: Well, sex and death, they're, they're not the easiest of topics now, but they do have a fairly broad, almost universal... I was going to say, appeal but that's the wrong word. People can relate on a very, very basic level to sex and death. Because if...

Charlie: You're a human being...

Mary: Yeah, because you're a human being. So you don't, you know, for example, if I did a book on, well, just today, somebody emailed me and said, "you should write a book about mutilations." I get email like this all the time. Okay, so say I did a book on body mutilation. A lot of people...

Charlie: Everybody goes through that phase of life.

Mary: Yeah, well, maybe on a college campus that's true. But, I just, you know, I just don't really see that my publisher going yeah, there's a book that we could put out at Barnes and Noble and lots of people go by and go wow, yeah, I'd pick up a book on body mutilation. Yeah, so sex is obviously of interest to everybody and death. I think people have a weird kind of a, attraction-repulsion thing with death. You know, it's it's the rubber necking at the car crash sort of appeal.

Charlie: Right.

Mary: So, there, in that sense, pretty, not guaranteed to reach a broad market, but there's, you know, I'm, I'm trying to, I'm trying to stick to topics that are of interest to a large number of people, because I make my living selling books. So, you know, I'm not, I'm not likely to write about something that's really obscure. Although, you know, it's hard to define that like, I like that book, *The Immortal Life of Henrietta Lacks*, which just came out, about cell culture. You wouldn't think that a book about cell culture would be a New York Times top 10 bestseller, but because the story behind it was so compelling, the side story of who the woman was, itself became this, you know, hugely fruitful, culture, cell culture line, this story. But anyway, how

do I choose my topics? For me, they've got to have science, they've got to have a little interesting history, I've got to be able to have some fun with them, because I like to do that and because readers enjoy it. And in science, there aren't that many topics that lend themselves to my kind of treatment. In fact, I'm on struggling right now to come up with another book topic.

20:00

So I got a book coming out, that's related to astronauts and space, behind the scenes space simulations and, you know, any weird roachable crap...

Ryan: Roachable.

Mary: ...that goes on in the world. Roachable. If, you know, it's something that has those three elements. It's roachable.

Ryan: Publishing, it's a publishing term.

Mary: It's a publishing term, exactly. It's a niche market.

Patrick: Yeah, I saw you have another book coming out, but this one has, this one has a longer title.

Mary: We tried very hard to come up with one, you try to come up with a good, kind of quirky, edgy, funny, not boring sounding space related title. It cannot be done. And you can do it now. Now that the book is about to come out.

Ryan: Don't ruin her book, Patrick

Mary: You...

Patrick: ... that's not bad. I saw that your, that *Spook* in some markets was *Six Feet Over* and I'm wondering why the British didn't go for the one word title there.

Mary: Well, I think that it was more I think *Six Feet Over*, that's a chapter title in the book and we considered using *Six Feet Over* but didn't only because it seemed because *Six Feet Under* is such a huge hit here in the US or what you know, still on

back then, and it seemed to derivative. But in the UK it's it's not. I don't think it's nearly as big of a hit show and so they felt like it was, they just liked it better. I don't think it was because it had, you know, people would think it's a book about CIA operatives or racism. You know, I don't think it, I don't think they were afraid of the word, but the title *Spook*. I think they just thought *Six Feet Over*. They just liked it better.

Patrick: I see.

Mary: There's actually a book already by the title *Six Feet Over*. It's a South African book. And it's, the subtitle is “the pleasures and perils of aerial crop spraying”.

Laughter

Patrick: What?

Mary: *Six Feet Over*

Patrick: That's... so you had to write about the afterlife and they already got to the crops spraying.

Mary: Yeah, it's, ah...

Ryan: Science tackles crop spraying.

Patrick: Yeah.

Mary: Curious lives of aerial crop sprayers.

Ryan: Definitely. Oh, well, that was also one of the things that I thought you capture really well, is that people respond, not necessarily, they don't, well, not necessarily. It's not even necessarily, it's people don't respond to facts and data very well, but they do respond to stories. And they respond to...

Mary: Yeah.

Ryan: ...people and you spend a lot of time talking about the people that are doing this research. And that, I just think that's the right tactic to get readers and people and other people interested in what's what the scientists are doing. Because, it's all too often that you just hear the quick, the quick news clip that scientists say this and...

Mary: Yeah.

Ryan: There's no context.

Mary: Yeah, not only the people, but also, it's important to me to have them in a setting doing things that they do in their lab and talking. And, yeah, I need to have sort of a narrative within the chapter if I can. Obviously with historical material, I don't, I can't do that, because I can't time travel. But the, that, so I spent a lot of time searching for some, research that's going to be going on at the time I'm writing the book. There's lots of stuff I can put in the book that happened 10 years ago or six months ago, but that's not really useful to me in structuring the chapter. I really want to be able to go somewhere like Jerry Mayhew, even if it's just sitting in Jerry Mayhew's office. I mean, we could have been on the phone, but his office was amazing in that, I counted the number of degrees, certificates, honors etc, on the wall. That's all he had on the wall. It was it was something like 43, and just, just, people's offices, simply sitting in someone's office, if it's something abstracted, like quantum mechanics where you can't see what they're doing in a lab. Just being in their little hive that they spend their days in, that is sometimes enough. Or being in an archive like in *Spook*, I tracked down, a sample of alleged ectoplasm that is now housed in the Cambridge University archive...

Ryan: I remember that, yeah.

Mary: ... in Cambridge. And it's this amazingly, sort of rarefied, academic little, it's just beautiful old building and people studying medieval land transfers and you know, old airmail letters in Hebrew and I don't know what all they are doing and you know, I'm with the box with a stinky cloth in it. And so just the juxtaposition of this box with the faintly smelling cloth that they've saved all these years and then these other people doing truly scholarly pursuits, plus the snotty people at the desk. That was all it took to have a scene. I didn't necessarily have to have. I would have loved to, somebody, I could have time traveled back to 1922 and somebody at

the Sorbonne University was actually testing ectoplasm in a laboratory setting, I would kill to do that, but nobody's doing that now. So I had to make do with the archives, but you can really make a lot with very little. And it makes all the difference in telling the story with it.

25:14

Ryan: You mentioned, you mentioned, lamenting, not being able to time travel. And if we figure that out, that would be a great book for you. It'd be you know, *Stiff*, *Bonk*, *Spook* and *Clock*. Science, science explores time traveling. It just sends you around time like a Peabody.

Mary: Oh, wouldn't that be great.

Ryan: Yeah.

Mary: Oh god.

Patrick: Yeah, you should, or, you know, I, this is gonna sound lame after that one, but I, you were talking about all the characters involved, and, and all these things. And I just think I always wind up reading these, sort of, math memoirs. And the people that that wind up making these breakthroughs in math are always so eccentric and so wacky. I just think you could get a lot of mileage out of dealing with some of these people.

Mary: Yeah, yeah. Unfortunately, I dropped out of math, senior year in high school, so that would be a, that particular...

Patrick: Come on, so did everyone else, that's your audience!

Mary: Advanced algebra did me in. And I was I was such a geek. I had, like a straight A average. And then I got to my second semester, whatever, it was senior year anyway and realized I was suddenly failing math. And then there was this wonderful moment where I realized I had enough credits in math and I could drop it thereby preserving my geeky perfect straight A average. But I just hit a wall, I had

absolutely no idea what was going on. And, but, I think, I think there's probably some truth to the, you know, that the mind of someone who's really, really good at mathematics and I'm, is, it Patrick or Charlie, who does the math?

Patrick: Oh, well, Charlie does the math. I read about the math. I'm Patrick.

Mary: Oh, okay, so both of you. But the mind of somebody who, if you're so intelligent that you can actually communicate in equations, you, you have to be a wonderfully eccentric person. I think. I mean, there's, often a correlation, I think. You guys have the most interesting offices.

Ryan: Charlie, are you eccentric?

Charlie: I'm definitely a little creepy sometimes. No, I think I am eccentric.

Mary: Eccentric is good. Eccentric is people that have books written about them. It's good. It's a good thing, as Martha Stewart with say.

Charlie: Well, thank you I'm flattered, I wanted to...

Mary: I try to work Martha Stewart into every interview.

Ryan: I'm sure she appreciates it.

Patrick: Check that box I guess.

Charlie: I wanted to go around the horn and give my, my idea. I don't know if it's annoying to hear all the different ideas of topics but I thought...

Mary: No, I, please ...

Charlie: Vice, vice, vice would be an interesting thing that's, that's also universal. Everybody's got their, got their vice.

Mary: Did you say mice?

Charlie: Vice, vice like addiction or...

Mary: Oh, vice, yes, that's an excellent topic. However...

Ryan: He's not elaborating, he's already just throwing the title at ya, so...

Mary: The, the, you know Peter Sagal, who does *Wait, wait, don't tell me?*

Ryan: Yes. I don't know him, I know who he is.

Mary: He wrote a book...

Ryan: I know who he is.

M: Well, you know the show. He's a funny guy. He, he wrote this wonderful book called *The Big Book of Vice*, or, I forget the title but he wrote about gambling, there was something sexual, alcohol, food, I mean, he wrote a very funny Peter Sagal, he got there before me but it is a good idea.

Charlie: I'll have to check that out. I think vices fascinating.

Mary: Mice might be interesting true.

Ryan: True. The curious lives of mice.

Mary: The not all that curious lives of mice.

Ryan: I feel like, I don't know, there's got to be interesting stuff going on in between the eyes.

Patrick: Just means you don't know enough, if you think something's not interesting, you just don't know enough about it yet.

Ryan: I guess that's, yeah.

Mary: That, that is true, that, this is the principle that has guided me through my career.

Ryan: Mmmhmmm.

Mary: If you, if you dig a little deeper, you'll find that it actually is pretty interesting.

Patrick: Well I was going to suggest this earlier, it's not exactly science but since you were writing about death, taxes seemed like the next logical step. But you already wrote a piece about the IRS.

Mary: Aw, I did years ago, that was the first thing I ever had published.

Ryan: Wow, Patrick, you did your research.

Mary: I know, good on yah.

Ryan: It's like we're, it's like we're scientists or something. He did his research.

Mary: Yeah, taxes. I, there's a guy out here, a guy that does monologues. They'll, I'm forgetting his name right now, but he what he did this very funny monologue about the tax code. This is a man who could make the tax code funny. Josh Kornbluth. That's his name. He's like the only person, I couldn't do it, I taxes, yeah, believe me, I've thought about it.

Ryan: Well, one of the things that I really liked about *Spook* was that you're talking with scientists a lot, but you're talking with scientists with a very eccentric passion. And you're also talking, for the first time I've seen in your books, with people that are very much not scientists. Like you go to a, go to a class on how to be a psychic or cold reader or con-artist.

30:04

Mary: A medium... Ryan: A medim, yeah, there ya go. Yeah, that's the word. Yes. So what was it like going from talking to highly educated, highly intelligent scientists doing publishable research to someone teaching a class on mediums?

Mary: I would have preferred not to include, there were two people, two places I went, that weren't academic, and it was the medium school and the trip to the Donner Party site with that international Ghost Hunters. And I did that just because I wanted to include the fact that when you get to the Donner camp, you know, the Donner Party, the people who, the cannibalism in the Sierra Nevadas.

Ryan: Yes.

Mary: Are you familiar with the right...

Charlie: Yes.

Mary: Well, when you drive there, because it's not far from where I live, you get there, and there's this forest service sign, you know, the piece of wood with the yellow lettering and it says Donner Camp, picnic ground. Honestly, I just wanted to put that in the book. I thought it would be entertaining. I just, it was it was an excuse to work the Donner Party into my book because I had this sort of long standing fascination with the Donner Party. And that's why they're in there. But that's, that, but that chapter, for me both of those chapters were frustrating because they forced me into a role that I don't like which is the exasperated, eye rolling, skeptical, annoyed person thinking Jesus, you people have no power of critical thinking.

Ryan: Mmhmmm.

Mary: Just, I can't, I don't, I don't like to make fun of people in general, though, some people think that I do that. I don't, I don't like to do that. And I don't like to be mean. And I don't like to particularly pick on people who are, have these beliefs because often, it's something, they've lost someone and they believe they're in contact with the person. So, that, I was, that was really awkward and I would, the reason they're in there is because I couldn't find enough academics. Because if you go into the, if you are a parapsychologist, you know, there is like two places you can work in the United States. This is, no, no, universities abide that kind of work. It's just it's a good way to ruin your career. So psychologists don't often become parapsychologists, there's just not a lot of work. So there's not, workplaces, there weren't very many places for me to go. So that's that's how I ended up filling in with the ghost hunters in the medium school. They were they were kind of fun chapters, but I'd rather be around people who I don't have to bite my tongue.

Ryan: Yeah, yeah. Well, I, but I definitely, the, the medium chapter where you're taking the class was one of my favorite chapters. Because by the end of it, you kind of just give up and start cold reading people and doing a decent job finally of being a medium.

Mary: Yeah, yeah, right.

Ryan: And I just I like, that was a great transition.

Mary: Oh, thanks. Yeah, it was, well it was, it was a fun, I think I, it appealed to me because it was, it was an old, old spiritual school. Like I wouldn't want to go to just some, you know some person who hangs out a shingle and says, I can train you to be a medium. I wanted...

Ryan: Yeah, we have one of those in Santa Cruz, but you know, you went to ah, it was in Britain right?

Mary: Yeah it was this old, oh God, the Arthur Finley, the Arthur Finley something or other college, yeah, they call it Arthur Finley College and so it was, you know, and it's this old stately, beautiful, I don't know when it was built, centuries ago. But it, so it had that kind of setting and it was in another country and it had, it had an appeal that anything here probably wouldn't have had for me. There are spiritualist churches or whatever you call them, here and there are people who practice, but I want I was attracted to the Arthur Finley College because, they're Finley College and they had, they sold Arthur Finley college box cutters which of course I couldn't bring home because at that time, around the time of box cutters were disallowed on airplanes.

Ryan: Mmmhmmm.

Mary: Anyway, yeah. Yeah, there was, there was a quirkiness factor to it and a charm to it. Until, of course, I got there and met my fellow students. Then it quickly lost its charm.

Ryan: Yeah. Yeah, I think, I don't think any of us would do very well in that situation, either. I think that we're all skeptical enough to call it like we see it in that context. And it seemed like your teacher was pretty fed up with your even meager questioning, at least in the way you portrayed in the writing.

Mary: Well, the thing was, that was astounding to me was that I was the only person in that class who didn't immediately claim to be getting stuff. You know, I mean, there was a point where she says, like, now, is everyone getting something

and I'm like, "No, I'm not." Like, trouble, aren't you.

Charlie: Yeah.

Mary: So that was kind of astounding to me. But I think that a course like that really self selects with audiences. Half of the people in the class had their Reiki three license.

35:02

Ryan: Wow, wow.

Mary: Reiki, you know, whatever that energy healing thing is. So I was very much out of my element there.

Ryan: And it seems like, well, it seems like you kind of, I don't know how much you see yourself writing who you really are in the books or writing yourself kind of as a character? Because you kind of come off as the, the quirky reporter who's going out and getting the story from the reclusive scientists and kind of getting in their lab when nobody else ever has before. And is that, is that how you feel when you're out there doing it? Or is that something you put into the writing afterwards?

Mary: No, I'm pretty, I'm pretty, pretty straightforward about, I don't, I don't really fictionalize myself much, or sort of play up. It's really what I'm doing. And if you knew how long and how many emails it sometimes takes me to get into those labs, it really is sort of a drawn out, stalking procedure where I, you know, I figure the first two emails won't be answered and maybe by the third, people don't like to say no three times. So sometimes that works just to be persistent and then, you know writing these letters, sort of offering them I'll let you check your quotes, you can, we can do a fact check process, I can put you in touch with other people who've been in my books and so I am really trying everything I can to get into, because, get into these places, where you know, they're, they're researchers who don't really, there's nothing in it for them really. There's no, they don't stand to gain anything by hanging out with me and they do possibly stand to lose something, you know, if they're not tenured yet, you never know.

Charlie: Right.

Mary: So I really appreciate the people who, you know, who do finally let me in, but that is, that, that is how I am and how I portray myself. I'm not very good at fiction. So if it's in there, it's likely to be pretty straightforward.

Ryan: Cool. Well, I think, to kind of, kind of one of my final things I wanted to say was, you know, We have a lot of both layman and academic listeners. And one of the coolest things, especially this especially striking in the book *Stiff*, which is the first book of yours I read. But it takes something that a lot of us consider kind of noble, but maybe don't know something, so much about, the concept of donating your body to science, which you say that and it sounds like you're doing this really good thing for humanity. And your book deconstructs that and breaks it down and says, well, maybe it's not so noble, maybe you're just going to get hit by a car, you know? As a cadaver.

Mary: Right, right.

Ryan: Which is, it's true, and it might shock some people and kind of discourage some people. But at the same time, it's a nice little micro cosmic metaphor for how science is done, where science comes across as this giant lofty endeavor. When really it's a bunch of hard working people doing a bunch of probably dirty boring things in a lab. And it's...

Mary: Right.

Ryan: And at the end, it's still, it still is noble and cool. And I felt like you...

Mary: Right.

Ryan: ...captured that really well, so, in a way that a scientist reading it could appreciate if they go and check it out.

Mary: Yeah, very true. And I actually was worried when I wrote *Stiff* that because I was laying it out so naked for people like this, this is what, this is what goes on in these, you know, various uses of cadavers. And this is, this is what it looks like, this is what it smells like. And this is, I worried that I was going, you know, all over America, people would be tearing up their little body donation forms. And actually, it was bizarre, what I did not anticipate, this like, we got so many requests from

people saying, that is cool. I want to go help test landmine clearance footwear. I want my leg blown up. I want to go to the body farm. Everybody wants to go lie out in a field in Tennessee and rot. People are like, how can I donate myself to the body farm? For some reason, people were just sort of like woah, cool. That's cool. Which was so great because I really was, so, I was worried I was, that I was going to put people off. And because I've had this experience before I wrote the book, I wrote about the Harvard brain bank, I think I mentioned this in *Stiff*. I went to the Harvard brain bank, and I, you know, wrote this kind of flip piece about what happens at the Harvard brain bank, kind of behind the scenes. Not dissing what they do, but sort of explaining, you know, that the brains get to travel with FedEx in a cooler up with a pilot. And, you know, this is a great quote from the guy describing, you know, they cut here and then they flip this, you know, they flip the scalp up over the face. And then, you know, it just is, and I got this letter from the director of the Harvard brain bank saying you have done irreparable damage. And I was taken aback that, I thought, then I went on to write *Stiff*, I thought, issue right, am I really going to be discouraging people. But my sense is, based on the number of inquiries we got, we got so many that we added a page to the end of this paperback saying how to donate your body to science.

40:00

Mary: Because people don't know, it's confusing. There's organ donation and then there's donating your entire body to medical research is different. So in this weird way it actually did not put people off possibly. It put some people off, but not, it seemed to win some people over in this weird way. But anyway, your point with, that wasn't what you, the point you were making, I just...

Ryan: Well, no, no that was the point I was making. Is that is that you take something and it seems like you're going to break it down irreparably but then you managed to maintain the nobility but it seemed like you're, you're...

Mary: Right. But I think, yeah, that there was a you know, that example that the crash test dummy that the automotive safety people had to deal with, so that, you know that there was a certain point in the 60s where there was the Senate subcommittee hearing about, you know, should this be allowed that people could, you know, whack, whack dead bodies with impactors, linear impactors. Or you put them in automobiles or anything or strike their face with whatever, you know,

should this be allowed. And the Upshot was that the researchers, for a while, had to go back to the families and say, okay, we need to tell you specifically what we will be doing with your grandfather or your father. This is what we're doing. This is what it will entail. This is why we're doing it. And this is why it's important. And the guy that I talked to, said there was, like two people out of the hundreds that they spoke to, actually decided to counter the wishes of the deceased person. In other words, when they understood, oh, okay, I see what you're doing and why you're doing, well, it's important and he's dead. So all right, go ahead. And it's more of this like fear of the unknown. Like I get calls from TV reporters, sometimes, when they hear about it, you know, some black market body parts scandal. And it isn't financial improprieties that they're upset about or are shocked by. And that, I mean, that is the real story. What they are shocked, is, oh my god, they cut them into pieces and put them in the freezer. And I think, what do you expect, I mean, how or how else do you make use of a dead body. It's wasteful to just use the hand and chuck the rest of it. Of course, you cut it up and you give it to different people and they all do useful things like and then they go, oh okay, I see. But it's sort of, you kind of have to follow through with the explanation of why it's important and why it's done the way it's done. And then people go, oh, okay, go ahead, cut me up.

Ryan: I hope far in the future that people talk about scientists who did cadaver research the same way they talk about the Indians on the plains, like they use the whole buffalo, they use the whole body. Nothing, the scientists back when...

Mary: Nothing, was wasted...

Ryan: When they the Universities of New North America.

Mary: This is extraordinary, nothing was wasted.

Laughter

Ryan: The torsos were shot with bullets and the brains are weighed and put in the museum. Yeah.

Mary: This is true, I talked to an ethicist at one point who said, that is part of respecting somebody's wishes is to make good use of them. Which I thought, well that's an interesting way to look at it. Because people often will say, "Oh, that's

disrespectful. That's so disrespectful, you cut him up and, you know, put them on a table" and whatever. You know, but that whole notion of respect, how do you respect the dead?

Charlie: Right, exactly.

Mary: Maybe it is respectful to make the most the best use of them.

Ryan: I mean, it seems like a good, it seems like the end of that book when people ask you about being respectful and things like that is the great, greatest launching point you could have asked for for *Spook*. Where you basically go well, even if they're, you know, gone...

Mary: Yeah. Ryan: Like, if they're gone, they're gone somewhere else anyway and...

Mary: Yeah. Yeah, yeah. Right. Right. Which was what sort of what happened. I mean, it was very much a second book that grew out of a couple of seeds planted in the first book.

Ryan: Mmhmm. And so, and so what about the, what about the next book after, after *Bonk*? What's coming up? Can you tell us anything about that?

Mary: Oh, *Packing for Mars*.

Ryan: Yeah.

Mary: The spacebook. Well, I'll just tell you it's ah, well, it's actually, I don't want to go too much into it...

Ryan: Sure, I understand.

Mary: Because I haven't, it's a ways, a ways out there. But it's, it's, I, it's kind of about this sort of, this, again, sort of a little known and kind of surreal world which is space simulations. Obviously I talk a lot about life in space, but since I haven't been there, and couldn't go, other, I mean, I was on the weightless flight, which was cool. But I've not been in space. So, but I was involved in, visited all these simulations. Because the thing with, the thing with space is that it is so hostile,

dangerous and expensive that every little thing that happens up there, gets tested down here, including, there's the, I'm like, my chapter, the book opens with this long chapter about the, the planting of the flag on the moon and the incredible, almost to an absurd degree reversing planning.

45:00

Problems, you know, problems that came up, things that had to be changed. You think it's simple, plant a flag somewhere. I mean, it was an extraordinarily difficult and absurd undertaking. So it's, it's all about that. And of course, I have, you know all the body fluids are well represented here again.

Ryan: I mean, it couldn't have been that hard to put a flag up in a studio in New Mexico, right?

Laughter

Mary: Yeah, right.

Ryan: Oh boy.

Mary: Oh, yeah, you know the moon hoaxer thing. I spent a lot of time plowing through old mission transcripts. And for every mission. For Mercury through, just Mercury through Apollo, there are about 1500 pages of transcripts. And to me, it would be easier to send a man to the moon than to fake and write and produce all that documentation, honest to God.

Ryan: That is the most literary debunking of the moon landings I've ever heard. Everyone always talks about, like, photographs and science, you know...

Patrick: Yeah, the shadows and when it...

Ryan: Yeah, I know, you're just like...

Mary: Oh man.

Ryan: ... like that...

Mary: Spend some, spend some time in the archives man.

Ryan: That's funny.

Mary: I know.

Ryan: That's really funny. Well, you know, you can, Charlie hasn't been to space but he is a planetary scientist, does a lot of Mars stuff, so he should...

Charlie: Actually, as an undergrad I worked with a scientist at University of Washington and we were measuring the distance between the Earth and the Moon by bouncing a laser beam off of, off mirrors that the astronauts put there. So that's just...

Mary: Yeah, right.

Charlie: ...that's, that's part of the hoax too. That, that we've we put mirrors up there to continue research and and keep the keep the hoax alive. I agree with you completely is what I'm saying, that like all this all this extra work and transcripts and subtle details...

Mary: Oh, yeah, right.

Charlie: Is so much more effort...

Mary: 40 years, 40 years of work in keeping that hoax alive.

Ryan: And not a single, not a single janitor at the hangar bothered to speak up this entire time.

Mary: Because we all know how easy it is to keep a secret.

Ryan: Right, right.

Mary: We know how good humans are at that.

Patrick: Yeah, even Apple's leaking parts now.

Ryan: That's true. The new iPhone, but that's that's a topic for another time.

Patrick: Right.

Charlie: You're going somewhere though Ryan.

Ryan: Was I?

Charlie: Yeah.

Ryan: Oh, I was just gonna tell her she should call you up if she needs, if she needs some Martian talk for her new book.

Charlie: Yeah, I'm good. I'm good with Mars 3.7 billion years ago or deeper in the past. I don't know anything about recent Mars.

Mary: Yeah. It's not really a Mars centric, I mean, it does, obviously I do talk about, it's not a book about Mars. Really Mars in the sense of space...

Ryan: Right.

Mary: Mars is sort of a stand-in for...

Charlie: It's the second coolest planet.

Mary: It is. Mars is very cool. I like, I mean, I, I hope, I hope they someday, I mean, it's an extravagant waste of money, but I'm all for it. I'm all for extravagant waste of money. That's what America does best.

Ryan: Well, it goes back to what you were saying about getting the public interested in science. You know, people care if they're sending humans, they care a little bit if you're sending a robot, but not really.

Mary: But not really. No, that's true. I know. I mean, when the, god, I was watching the, well, you couldn't really watch. But the, you know, the Phoenix lander. I was, you know, on NASA TV, and even just, all, you're just watching Mission Control at JPL. You know, watching these guys and just these guys sitting at their computers

with their fingers crossed. And, I mean, the drama in the room. It was just, to me, it was, this amazing human drama, even though there was no humans going. It was robotic. But just an I, just imagine the, everybody would be watching, it would be kind of this great kind of global. I think it should be a cooperative effort, an international effort. I think it could be kind of a wonderful thing.

Charlie: Yeah, I think so too. One thing I think about and this isn't the general consensus amongst planetary scientists by any means, but you're talking about how they fuss and get so obsessed with every little detail of safety, and maybe it shouldn't be so safe. Like going to North America from Europe in 1492 was a very risky venture. And there's, there are plenty of people that are willing to, willing to space travel without without all the safety nets in place.

Mary: Yeah, and a lot of them are in the astronaut corps.

Ryan: Yeah, I've made that point before too.

Mary: Yeah.

Ryan: And it makes it more exciting, makes it a bit better human drama that the public will care about.

Patrick: A win win.

Ryan: I mean, more people come to see the trapeze artists without the net than with the net. It's just...

Mary: Exactly and there's ah, there's people who would be a-okay with just, you know, yeah, just get me there and, yeah, just, just send me some supplies now and then and I'll just live there for the rest of my life. You don't have to bring me back. I mean, that's obviously not going to happen. NASA is not going to go for that but...

Patrick: Yeah, you might change your mind at some point.

50:00

Ryan: Yeah.

Mary: Yeah, it's not a place that I'd really want a...

Patrick: Yeah, which is, yeah...

Ryan: A lot of people that live in Arizona now.

Mary: True, yeah. The, ah, they're building, I don't know, outside Las Vegas, the outskirts of Las Vegas, they are building this, I don't know how many billion dollar Mars resort called Mars World. And you look at a photograph of the outskirts of Las Vegas, it really does look a lot like Mars.

Patrick: Except for the blue sky I guess.

Mary: Well, yeah. Yeah. People don't over... Are you gonna mimic the Martian gravity? And he said, "Well, no, but we're going to put a little extra bounce in the boots that people..."

Ryan: And hopefully not nearly as much oxygen so people will just be...

Mary: Yeah.

Patrick: Yeah.

Mary: Yeah. BYOO.

Patrick: Well, they already got the air conditioning figured out there.

Mary: BYOO... BYOO... what?

Patrick: They already had the air conditioning figured out in Arizona, so they ought to be able to chill it down pretty well.

Ryan: Mars is pretty cold.

Charlie: 220 Kelvin.

Ryan: Yeah, That's pretty cold, that's frigid. One might say. But Mary, we've taken up enough of your time this evening. So we'll let you go. But thank you so much for talking with us. Where can people go on the World Wide Web if they want to find out more about your work and projects and things like that?

Mary: Well, I have a neglected website, Maryroach.net, which I haven't done much on. There's also a Mary Roach fan page on Facebook. Which, there's no, probably no reason for anyone to go there. Unless they just want to become a fan. There's not any, well, there's some information.

Charlie: That sounds like a dare to me.

Patrick: Don't you say you're not very good at PR Mary?

Mary: Yeah. Yeah. That's, that's, talk to my publicist.

Ryan: I just checked. You have three fan pages. I just checked.

Mary: Yeah, I didn't start, I, I ah, people, people start them. That's just something that they, they'll get me, there's one that I started at some point or my husband did, I'm not actually on Facebook. So I don't, ah, but the other two, have, somebody started them. I don't know what's going on.

Charlie: You have a TED talk up, I noticed that's really, really fun.

Mary: Yeah, the TED Talk, the TED Talk is, yeah, if you want to entertain yourself, go and read the YouTube comments afterwards. Compare, like, the TED website comments, which are very erudite and very well considered and then go to YouTube and it's like, "look how her ass sticks out man." It's just very funny. I guess the average age of YouTube viewers is around 11.

Ryan: Yeah, it's not that, I don't think, it's not the best place for discourse.

Charlie: Yeah, they learn English via text messages.

Mary: Yeah, yeah, so.

Ryan: Yes.

Marry: Well, anyway...

Ryan: We will, we will post links to all of those things plus Amazon links to your books on sciencesortof.com in the show notes for this episode.

Mary: Thank you.

Ryan: Yeah, thank you so much for joining us. This is awesome discussion, a lot of, as, as is our usual format for the show. It starts off one way, gets a little, gets a little serious and philosophical for a minute, and then goes off at a wild tangent. So I'd say it's...

Mary: It's a great show. Thank you so much for having me on.

Ryan: Thank you. All right. Well, hopefully we will talk again soon. I'll be I'll be the Cal Academy every, every Thursday for the foreseeable future.

Mary: That's a really great gig. Very cool.

Ryan: Yeah, Yes. I'm very excited about it. So you'll have to come out and say hey.

Mary: I will try to do that.

Ryan: All right.

Mary: Have fun with that.

Ryan: Great.

Mary: Okay. Take care you guys.

Patrick: Alright, thanks a lot Mary.

Charlie: Bye.

Mary: Bye.

Music

Announcer: Hey y'all, it's Trailer Trash.

Ryan: Speaking, speaking of the results of bonk, this week's trailer is the horror movie *Babies*.

Patrick: Horror documentary.

Ryan: Horror documentary, *Babies*.

Patrick: Well, there's not much to say as far as introducing it. I don't know the director but it's a documentary so there's no actor you've ever heard of in it.

Charlie: Yeah, this is a documentary featuring four babies. It's directed by Thomas Balmès or Balmès and Produced by Alain Chabat. And ah...

55:03

Patrick: Or Shabot...

Charlie: Yeah. And yeah, it's, it's a horrifying glimpse into the lives of four babies around the world.

Ryan: I would say it's horrifying because I don't have the benefit of being married. So if there was a, if there was a baby in my life, there'll be some serious problems.

Patrick: I'm married and there are serious problems associated with babies.

Ryan: Ahha, see, it's horrible. But these babies are pretty cute.

Charlie: So where are these babies. One's in, one's in Mongolia. One's in Africa, I think like...

Ryan: Namibia.

Charlie: Namibia, yeah. One's in SF too.

Ryan: So, SF, Mongolian, Namibia and Tokyo.

Patrick: And the only one that holds any interest for me is Tokyo.

Ryan: Really? The African babies for me, by far, the most interesting.

Patrick: Well, we've seen that a lot.

Ryan: What are you talking about?

Patrick: Like, I there's just all these, I feel like you're all the time seeing, like the conditions that Africa babies are grow...

Ryan: But these are so cute and happy.

Patrick: Okay.

Ryan: I don't know the trailer, the trailer seems, the trailer opens with the two little African babies because the African baby has a young sibling around their age and they're playing with stones, like that they would use to crush corn or something like that. And they're just so adorable.

Patrick: And they're fighting.

Ryan: I'm not actually I'm not actually horrified by babies. I thought they're really cute. I just thought it was a funny joke.

Charlie: Yeah. Yeah, this this movie is 100% cute. The whole trailer was just looking at babies doing silly baby things.

Patrick: Yeah, it's gratuitous babiness.

Charlie: It's, it's baby porn is what it is.

Ryan: So, how fast are the two of you getting dragged to see this movie by your respective spouses.

Patrick: I don't, I don't think it'll happen.

Ryan: Because you actually have an actual baby of cuteness all around.

Patrick: Yeah, we don't we don't need to, I don't need to watch babies crying, on TV. I can...

Ryan: You can create it.

Patrick: Yeah, exactly.

Ryan: You create crying.

Charlie: Yeah, I don't know. I mean, I get enough interaction with babies and I plan to be a father eventually I don't know if I need to pay 10 bucks to see this movie.

Ryan: It's not whether you need to pay, it's whether or not your wife makes you go.

Charlie: Ah, she won't, she, she delivers babies nightly. I don't think she's...

Ryan: Ah, that's true.

Charlie: ...interested in this movie either. I mean this there's 7 billion of us on the planet and population growth indicates that there's 7 billion people alive before us. So at the, with 14 billion babies, I think the market's a little saturated.

Ryan: I used to be a baby back in the day.

Patrick: My wife and I both agreed that the Tokyo baby is the, is the interesting one. Well, we were in Japan earlier, well, actually last year. And so, just the logistics of trying to raise something that kind of takes a little bit of space in a city with no extra space, but I think would be pretty interesting.

Ryan: Hmm. I like the Mongolian baby too. I think I like babies out outside. I think I'm an outdoor baby guy. I like, there's the scene where the Mongolian baby is taking a bath in a little tub of water and the goat comes up.

Charlie: Goat comes, yeah...

Ryan: Starts drinking out of the tub and the baby just looks like just, oh yeah, there's the goat. And I just can't imagine an American baby being that cool around a goat.

Patrick: I just get the, I feel like I, I know pretty well what the trials and tribulations would be of having to raise a baby with like, no electricity. I mean, I can foresee like the consequences and the, the, the hardship there. But I know there's, there's got to be things that are going to be challenging with raising a baby in Tokyo. I just, I just don't know what they are yet. That's why that one holds the most interest for me. I'm like, oh, that's got to be difficult, but for reasons I don't quite understand.

Ryan: I can see that, I can see that. But uh, so, so Patrick as the, as the only one of us who has successfully and been legally charged with having reproduced, what about, have you introduced Vieve to any goats or cows yet?

Patrick: Vieve, ah she liked dogs for a long time, but then she got scratched by one and now she's afraid of them.

Charlie: Wow. Once bitten twice shy.

Patrick: Yeah.

Ryan: It doesn't make much. Exactly.

Patrick: Yeah, I didn't take, it doesn't take much.

Ryan: So it sounds like we're, all, you know, we all thought babies were cute, but maybe not super, super sold on this one.

Patrick: I mean, it's a Mother... it comes out for Mother's Day, right? I mean, this is something I would watch if it came on the Science Channel or the National Geographic Channel or whatever.

Ryan: But not in the theater.

Patrick: Right exactly. Like this is something I would set my DVR to record like *Life*, which is coming on the Discovery Channel. Like oh, yeah, I would, you know, I, I'd make an effort to either be on the couch or record it, but I'm not gonna pay \$10 or \$12 to go go see it.

Ryan: Such an American that being on the couch is considered an effort.

Charlie: I mean, I'd be interested to see what what the backstory is to this is. The trailer is like, the most nauseatingly syrupy sweet thing. I mean, it's like, those awful magazines like, *Dog Fancy* or something. And so I just thought, like, if this is *Trailer Trash Talk*, like the trailer is just...

1:00:10

Patrick: Trash.

Charlie: Trash.

Ryan: Okay. Well, it sounds, like it sounds like we've come to a stronger conclusion that I expected. I thought I was going to be the one who was against babies just out of fear for my own independence.

Charlie: Oh, I'm all for babies. And like I said, I plan to have one.

Ryan: Me too, but I gotta get, you know, the whole life situation sorted out first.

Patrick: I mean, yeah, you're kind of right, Charlie. This kind of is baby porn, as bad as that sounds, in a different connotation. It's like...

Charlie: Yeah.

Patrick: ...just filming...

Ryan: Yeah, seriously, the FBI is gonna be knocking on our doors as soon as this episode is really... you guys distributing baby porn on iTunes.

Charlie: I say it in the same way that people call, like, you know, shows, shows on TV, military porn, or ski porn or snowboarding porn or surf porn...

Patrick: Or surf porn, whatever, yeah.

Ryan: See, the thing is, there are actual porn websites out there for all those things, guaranteed.

Patrick: Yeah, well we know this, right from...

Ryan: From the gay science comedy porn.

Patrick: From the previous, gay science comedy episode, yeah. But, yeah, I mean it's like, we can sacrifice well I don't know this for sure but the trailer certainly looks this way, right? We can sacrifice plot and basically everything else and just show cute pictures of babies and get away with it.

Ryan: So we're going thumbs down, run around the board.

Patrick: Yeah, well the, based purely on the trailer I definitely, yeah, I'm definitely going, like concept maybe it's kind of an interesting concept. Did the trailer do a good job of indicating to me that they're going to do anything other than show a lot of baby pictures? No. And from a, I don't know what this stock is trading at, but I imagine that this movie isn't going to do that well. I could be wrong but but on all, yeah, this fails on all accounts.

Ryan: Okay.

Charlie: Well, I mean if, if they had like baby special edition with commentary from Louis C.K. and Zach Galifianakis I think this would be the best movie ever. But...

Ryan: I think it would be interesting if they filmed this movie 20 years ago and the commentary was from the babies, now adults.

Patrick: Sort of like *The Goonies Special Edition*.

Ryan: Is there a *Goonies Special Edition* that did that.

Patrick: Yeah, well, I don't know if it's a special edition, but in the special features on *The Goonies* DVD they had, they get three or four of them back together and they're sort of like reminiscing.

Ryan: Wow.

Patrick: Including Samwise/Rudy.

Ryan: Which, oddly enough we've mentioned before on this show. I'm not sure why, I don't remember the context, but we have talked about the trials and tribulations of Rudy and the ring. That would be a hell of a crossover. Oh man, I want Mr. T as the uplifting janitor Hobbit. Three foot nothing. 50 pounds of nothing. Not an ounce of hobbiting ability. Really? No one else remembers that speech from Rudy.

Patrick: I pity the fool...

Ryan: Oh boy.

Patrick: ...that remembers that speech from...

Charlie: Yeah,

Ryan: It's not like I went to Notre Dame or anything, I just, you know, *Rudy* is a decent movie, maybe. Is it decent? I don't know.

Patrick: Um, I once saw a list of, I don't know what it was, top 25 or top 50 Sports movies that made a point to leave it off.

Ryan: Wow, really?

Patrick: Yeah...

Ryan: That seems...

Patrick: And it, well, and at the very end they were like, yeah, we know what you're looking for and it ain't here. We don't think *Rudy* was a very good movie.

Ryan: Okay.

Patrick: I forget, I forget their reasoning for it. I just thought it was pretty hilarious that they, they made a list with, basically the intention of leaving that one off.

Ryan: Well, I can't argue with whatever nebulous list you're referring to.

Patrick: So I guess, it was either ESPN or *Sports Illustrated*, back about five or six years ago, made a list of the...

Ryan: Well it's probably too late to go buy stock in *Rudy* but people can buy stock if they want to in *Babies* and how to do that, Patrick?

Patrick: You can go to the Hollywood Stock Exchange found on the world wide web at HSX.com. Once you're there, you should sign up for an account and then join a league and we recommend the Science sort of league, which you can find by typing science sort of in the league league search box. And then you can buy, trade, sell stocks in movies and stars and TV shows and other derivatives and all kinds of securities with fake money.

Charlie: Yeah, fake money, fake money and see how you compare to the other Paleo Posse in the league.

Ryan: Chances are you compare better than most of us. Most of us being the Paleo Pals and the Science sort of account.

Patrick: Yeah, unless your name is Rejinx.

Ryan: Rejinx!! You could, you have the power to reset that right, Patrick? You can, you can...

Patrick: Yeah, and we need to do this sometime. We need to have like a three month competition and see...

Ryan: Three months a long time.

1:04:58

Patrick: Well, one month is too short. And, we're so, it's, it's, our scheduling is such that you know, we're always sort of a week behind things and have a feeling we would forget to deal with it in a timely fashion. So I think three months, that's a quarter of a year. Quarters seem to be important in financial, the financial world, so that makes sense.

Ryan: Okay. Maybe we could do it at the end of the year when all the Oscar movies comes out.

Patrick: Yeah. And they all, and they also, didn't, the Hollywood Stock Exchange always has bets on who will win an Oscar when the list comes out too, so.

Ryan: Cool. All right. Well, hopefully people, people could join the fun there. There's I mean, people that's becoming an active little corner of the internet for us. Yeah. A little sub, a little sub community of Paleo Poses holed up in the in the Hollywood Stock Exchange, colluding and, and whatnot over what stocks to buy.

Ryan: Yep, yep. And there are people on there like AK909090, who is happy that he's just ahead of us and he apologizes for the schadenfreude.

Patrick: Yeah.

Ryan: Well, I don't accept your apology. Make some bad bets, buddy.

Patrick: I don't, I don't mind so much. I mean, we, we're giving away what we're betting on here.

Ryan: That's true.

Patrick: So...

Ryan: We can easily be undercut, I guess.

Patrick: Yeah. And we also have, we have very strict criteria for what we're going to buy and sell stock in.

Ryan: Yep.

Patrick: So we don't, we don't spend time analyzing whether we're going to make money or lose money. Although it turns out we're making a little bit of money.

Ryan: Not in my personal account, hoo boy. I gotta, I gotta start thinking about stuff before I buy it.

Patrick: Well...

Ryan: Well we were talking about *Babies*.

Charlie: Can I, Can I just say for the record, it's like 78 degrees and pouring down rain here and I was doing fine with my...

Ryan: Boohoo. You're in Hawaii.

Charlie: With my fan on but I turned the fan off for the recording. And now I'm just like...

Patrick: Dripping sweat. Yeah.

Ryan: Take one for the team Chuck.

Charlie: I am. I got my Primo lager, so...

Ryan: Put on your forehead.

Charlie: I'll maintain.

Ryan: Well, speaking of a face only a mother could love. Should we talk about some *drosophila*?

Patrick: Your soft love? Sure, let's do it.

Music

Charlie: How do I say it, drosophila?

Ryan: Drosophila.

Patrick: Drosophila.

Charlie: So, drosophila, or the common fruit fly, there's a new study about them, that's, reveals the sexual tactics of male flies. And they did this by shaving their genitalia with lasers, frickin laser beams. And so this, this study is by Polack and Rashed, it's in the Proceedings of the Royal Society, butters, B. And the title of their study is "Micro scale laser surgery reveals adaptive function of male intromittent genitalia". So what's an intromittent genitalia you may be asking. It is the penis of the fruit fly happens to be covered with barbs and spines and all sorts of horrifying intromittent genitalia, appendages. And they use these in a very specific way and they've evolved these spines and burs for an evolutionary purpose that we will go into. So, is that fair enough introduction?

Ryan: I think so. Yeah.

Patrick: Yeah, good enough. Yeah, I can't wait till Gillette gets a hold of this. I'm tired of manscaping with like 17 blades, let's just do it with lasers.

Ryan: I didn't, I didn't think about the practical applications to human genitalia, to be honest. But, glad...

Patrick: Or more, you know, love handles or backs or whatever.

Ryan: Love handles?

Patrick: Whatever you...

Ryan: What?

Patrick: Whatever you like to manscape.

Ryan: Do you have hairy lovehandles Patrick?

Patrick: I have neither hair nor love handles.

Ryan: Oh, okay, so you're, you're...

Patrick: Actually, they're starting, I'm starting, yeah I'm getting old. I'm starting to get a little of both actually.

Ryan: Hmmm. That's ah, alright, it sounds like we need to go have a Science sort of weekend retreat where we do manly things that work off love handles like climb mountains and bike, bike through rivers.

Charlie: Yeah, and then get like...

Ryan: And kayak down glaciers.

Patrick: And then we can combat hair with, like, some kind of waxing and facial scrub and...

Ryan: I was just thinking we do so many awesome things the hair would just fall off and grow back on our heads.

Charlie: We could do like firewalking or something.

Ryan: There you go.

Patrick: That'd be good.

Ryan: Yeah. So fruitfly penises and lasers.

Charlie: Yeah, so, these, scientists they did a, you know, a very controlled scientific thing.

1:10:02

Ryan: How do you hold down a fruit fly to...

Patrick: No kidding, man.

Ryan: Shoot it in the face... they had, a laser...

Charlie: Their question was like, why, why are their penises so horrifying?

Ryan: Right?

Charlie: And, to, to approach the answer to this question, they're like, well, let's make them. Let's make them look normal and get rid of all the barbs and see what that does.

Ryan: Which is such an anthropocentric point of view to make them normal because their penises don't have spikes and barbs. Listen, I've been to San Francisco, I've seen some weird stuff.

Patrick: Oh, I, thought the original...

Charlie: Hey, you just called it weird. I'm talking about normal...

Patrick: I'm not, I thought the original question was not, it's like, how do you do this? Like, how do you, what kind of instrument does it take to shave a fly penis??

Laughter

Charlie: I guess the zero order question is, I mean, and I've gotten myself in trouble before talking down other people's science but, why?

Ryan: Well, I mean...

Charlie: Why are we concerned with the barbed nature of the fruit flies penises Aren't there other pressing questions?

Ryan: You know, don't, Charlie, listen...

Charlie: I know I'm getting, I know I'm getting myself in trouble...

Patrick: Well, for someone who studies Mars, you're being awfully, get off your...

Ryan: Get off your high...

Charlie: I'm not talking from a personal standpoint, I'm just advocating for the devil.

Ryan: I'm, listen...

Patrick: Who probably has a barbed penis.

Charlie: Who probably doesn't need any more lawyers but just is...

Ryan: You're advocating for Sarah Palin because she has complained about fruit fly research in the past. Now do you really want to, do you really want to go there Charlie Barnhart? You're in league with Sarah Palin right now.

Patrick: He said he was advocating for the devil.

Charlie: I'm a patriot.

Ryan: You're a patriot. Are you wearing, are you wearing your American flag pin right now while you record? It's in your contract.

Charlie: I'm wearing an American flag cape, as I do all the time.

Ryan: Is it touching the floor?

Patrick: No of course not. And he also takes it off when it rains and after dark.

Ryan: It's raining right now. He just said so. Ha! Caught you Charlie. And it's after dark in Hawaii. Maybe, I don't know...

Charlie: So did you guys read what happens when they remove the spines?

Ryan: They can't mate.

Patrick: They can mate, they're just not as affective.

Ryan: No, the ones who, if it's partially shaved, they can still mate. Well, but if it's fully shaved, then they were down to a 20% mating success, which is, I mean, if you're only successful 20% of the time, you're gonna have a lot of unhappy fruit fly ladies around.

Charlie: And that was only when the male was by himself in the fruit fly cage.

Patrick: I'll just tell you, I only have one kid. My success rate is far less than 20%. I think we should actually touch on the science at some point.

Charlie: Yeah.

Ryan: Okay, so why would you have a barbed penis? Um...

Patrick: Ah, well, the short answer is it keeps the female from flying away.

Ryan: Yeah. I read one article on this that said, you know, the, the barbed penis can damage the female and the question was like, why would you want to hurt something that you're mating with? And they made it sound like there would be no evolutionary advantage to that. And that, to me is dumb because there's an obvious evolutionary advantage. If you hurt the female, then assuming you impregnate her, she's going to put more energy into those offspring because she herself is not likely to live as long. So she will have less mating opportunities in the future.

Patrick: I guess.

Ryan: That's what I was taught in evolutionary biology classes.

Patrick: Well, and yeah, I mean, they don't live that long anyways.

Ryan: True.

Patrick: And they, but she may avoid future sexual encounters if she's injured.

Ryan: Learn her lesson.

Patrick: Yeah, maybe. But I mean, flies certainly aren't the only, the only animal with sort of turbulent sexual practices.

Ryan: No, and there are other insects that use piercing genitalia to get closer to the ovum...

Patrick: Right.

Ryan: Not necessarily going through proper channels.

Patrick: This article mentioned ducks which have a sort of spiral...

Ryan: We could do a whole show on duck sex, let's ah...

Patrick: And, oh yeah, yeah, we should actually.

Ryan: Let's just leave that one alone for now.

Patrick: And then there's also, I think pigs generally have the the male, the head of the penis, quite engorged, to the point where you can't really, the female can't really get away until it's all over and done with.

Ryan: The male pigs orgasm for up to a half hour.

Patrick: According to Mary Roach's TED Talk.

Ryan: Yeah, a half hour.

Patrick: Well, yeah, I mean,

Ryan: Man.

Patrick: Maybe you're doing something wrong, Ryan.

Ryan: I don't, I don't know what you're talking about.

Patrick: We should do this, we should do one of those a tantric meditation centers.

Ryan: We should to a tantric podcast where we podcast for like 24 hours without climaxing.

Patrick: I think you could just play 13 shows in a row and get the same effect.

Laughter

Charlie: May suffer permanent damage.

Patrick: Uh, anyways, yeah, fly penis. Yeah, so you cut off the spines, it doesn't work as well, case closed.

1:15:07

Ryan: The study said the spines were too small to cut off by hand, which means they tried. Right. Don't you think?

Patrick: I don't know.

Charlie: Maybe not. There's, there's some things, I can...

Patrick: I can just look at it and tell I'm not gonna be able to do by hand. Yeah.

Ryan: Maybe so, they need robots.

Patrick: I still don't know how they did with lasers.

Charlie: Yeah, I don't either.

Ryan: Yeah, it doesn't really explain that, I guess...

Patrick: Yeah, they, I want to read the materials and methods section.

Ryan: Maybe we should try and get these guys on the show.

Charlie: I still don't know why.

Ryan: You don't know why it's important, I mean, I think it's more of a broader I mean...

Charlie: It's an interesting question about evolution and an interesting adaptation.

Patrick: Exactly, it's an evolutionary adaptation.

Ryan: And I guess there are, you know, there are lots of different species of drosophila and they all have slightly different penis spines. So maybe, you know, you could answer the question of is the specificity of the penis spine somehow important to the mating or is it just the spines themselves. And the specificity is just for species identification. Because there are lots of animals that have antlers. And all the antlers fulfill roughly the same function. And they all look different. And there's no real reason for them to look different other than for telling one species from another so you don't mate with the wrong thing.

Patrick: Yeah. Well, and then, you know, this article mentioned spiders and spiders basically have a lock and key system whereby you can really only mate with your own species because, but, I don't, I don't get the feeling that this, that these spines would prohibit you from mating with another species. I think they're probably telling each other apart in different ways than these spines. I don't think they're inspecting the male genitalia before doing this and being like...

Ryan: Maybe, I don't, you're probably, your probably, Patrick. I just...

Patrick: Move along...

Ryan: I really like the concept of species separating mechanisms that prevent the separate species from mating with each other. To me, that's just an interesting branch of evolutionary biology. So maybe I'll save that topic for another time. It's more relevant than a spiky penis. And none of these, none of the articles I read actually had a close up.

Patrick: Yeah, yeah, you would think that'd be required.

Ryan: I know. I wanna, I mean, I'm not a prude. Show me a fly penis. Let's go.

Patrick: Yeah, especially shaved fly penis.

Ryan: Right. I want to know. Well, I want to see the before and the after.

Patrick: Exactly.

Ryan: So flies get Brazilians and are less effective.

Patrick: Boggles the mind.

Ryan: Do you feel boggled Charlie?

Charlie: No, I was just worried about what would happen if you tried to do a google image search of any of this.

Ryan: What would it, your search term that you were thinking of looking for?

Charlie: If you tried to Google shaved fly penis and see, see what you'd get?

Patrick: The mile high club might figure in. I would go with drosophila.

Ryan: Yeah, there's an inappropriate picture within five. Within five photos on Google image search. There's, there's a tattoo, a fly, a lol cat, something from China and then an inappropriate pornographic picture. So only one fly in the first five and two on the top row

Patrick: I'm telling you to drosophila

Charlie: Now, aren't drosophila, like, some of the most quickly, not evolving, but the, the...

Patrick: Yeah their generation time is short.

Charlie: They, they, specialized genetically very rapidly right? You can make hairy, hairy flies, or ah...

Patrick: Well they, yeah...

Charlie: ...small wings or big wings, with...

Ryan: Patrick, drosophila was so much worse.

Patrick: Really?

Ryan: Well, the first, the first, pornographic picture is still number five, but there's two on the top row instead of just the one. And it just goes downhill from there.

Patrick: That makes no sense.

Ryan: Drosophila has so much, ugh, X, goodbye Google image search. I've got to turn safe search back on.

Patrick: Drosophila is a favorite genus for genetic research, but, I think, primarily because, well, we know a lot about it. And their generation times are short and they breed easily in captivity. And so it's, it's easy to sort of...

Ryan: But they're multicellular, they're actual animals instead of E. coli which are just single celled bacterium. So they're a little more complicated. Like, you could do some more interesting stuff with them.

Patrick: Not that I don't mind talking to you guys but I guess let's, let's wrap this up Paleo...

Ryan: Paleo POW!!

Charlie: Yeah.

Patrick: Oh (bleep).

Charlie: What??

Laughter

Patrick: Why

Music

1:20:16

Patrick: Well, speaking of buying into the show hook, line, and sinker.

Ryan: Oh, I like that. I like what you did there.

Patrick: Let's read the Paleo POW.

Ryan: POW! Kabam!

Patrick: All right, well, I'll kick it off here. This, this, email is from Kieren, who lives in New Zealand, I assume, because that's where he posted an iTunes review. And he's just forwarding us the review he posted on New Zealand's iTunes.

Ryan: Which is a great idea, if you...

Patrick: Yeah. No complaints there. In fact, I like it, so I'm going to read it out here. So, he was kind enough to give us five stars. And Kieren says "That Science sort of is a superb podcast with just the right mix of science ,personality and humor."

Ryan: He spelled humor wrong.

Charlie: Did he spell it like color or behavior?

Patrick: Very similar...

Ryan: Well, those are both spelled the same way in America. Just kidding. Kidding. I love the Kiwis.

Patrick: Ah, he "enjoys how we dissect science articles in a way that is easy to understand and also thought provoking without becoming dull."

Ryan: That's ironic coming after the fruit fly penis debacle.

Patrick: "The musical interludes are fantastic, and he has purchased several of the songs featured on the podcast. Other conversations which enter the geek realm also apply a fantastic scientific perspective to comics, books, and films. The 'What are we drinking segment' is also surprisingly informative. And as I am under age, I will drink either ginger beer or iced tea while listening." That's good to know you're a responsible listener Kieren. "Keep up the good work and the good drinking."

Ryan: But once you're of age, ginger beer, rum and a little bit of lime is a fantastic drink called a dark and stormy. Is that inappropriate? Should I not be giving cocktail recipes?

Patrick: I get, I mean, you gave the caveat, once he's of age, which is only 18 in New Zealand I think.

Ryan: Yeah. Should we call it a dark and sciencey since it's Science sort of. I feel like we need an official cocktails. We have the Tequila sort of.

Patrick: That's pretty good. The dark and sciencey or the Tequila sort of.

Patrick: The Tequila sort of.

Ryan: I haven't tried it yet. Charlie said it's...

Patrick: It's pretty much, well, the official drink of Science is...

Ryan: Cocktail.

Patrick: Okay, what's the official drink?

Ryan: Beer.

Charlie: Alright.

Patrick: Alright, well, who's next?

Charlie: I'll go ahead and read my Paleo POW. Um, so I was checking out the Science sort of Facebook page and I noticed that we have a 500th fan and our 500th fan comes from Karen who lives in Washington DC. And we're just glad to see the Facebook page gets so much love. We're getting several posts a week and it's an excellent place to interact with each other and Paleo Posse and, and Paleo Pals themselves. So yeah, check it out.

Patrick: Our nation's capital representing.

Ryan: All right, well Karen, thanks. Thanks for being number 500. That's completely awesome. We mentioned this on the Facebook page but we'd be happy to send you a prize pack for being number 500 cuz we kind of look for an excuse at this point to give people prize packs.

Patrick: I don't know about that.

Ryan: No, that's true. I needed a song for last week's show and I tweeted about it and got a couple of emails and those people are getting prize packs too, so...

Patrick: Sweet.

Ryan: I got, even though I got multiple, multiple people responding everyone gets a prize pack, not just the first, but everyone. We're generous like that. Science sort of, the science podcast that cares. And if you are also on the Facebook page, you should go and congratulate Karen. She posted saying that she was the 500th. And if you're not on Facebook, you should go to the Facebook fan page and join up. And I guess they're not called fan pages anymore because it just says people who like it.

Patrick: Right?

Ryan: So come like us. I'm like, Karen.

Patrick: I was reading about this. Yeah, Facebook's going to try to take over the world here. Yeah, about time. As long as they bring us with them.

Patrick: Yeah.

Ryan: I'm cool.

Patrick: Sure.

Ryan: All right. My Paleo POW. Pa-Bam! Is, it's a, it's from another Z, Z lettered place and that's the Zune marketplace.

Patrick: Oh, sweet.

Charlie: Nice.

Ryan: And it's from Dennis. He says, "hey, I've just checked to see you guys are in the Zune marketplace rankings and you're the 53rd most subscribed scientific podcasts, just one behind James Randi's."

Patrick: Nice.

Ryan: Which was lower than I expected, and I'm not that surprised by that. I think there are a lot of people that do better science podcasts than James Randi.

1:25:00

I like James Randi just fine but, ah, what are you gonna do? He says "However, what is truly worrying is that you are behind both the *Astrological Life* and *Astrology for Beginners* in the scientific podcast rankings." Emphasis in the original and in my voice because I agree. And Dennis points out that though "now there are two podcasts that think they are science. Anyway, I hope this changes soon. Keep up the good work. -Dennis. You're only British Virgin Island listener?" So we have any other listeners in the British Virgin Islands come let Dennis know that he has company on the islands.

Patrick: I know we've, we've had visitors to the website from the British Virgin Islands. Although it could have been Dennis. I don't know if that's, that's the case or not.

Ryan: For multiple islands...

Patrick: Ah, I can't, I can't, I don't have that resolution.

Ryan: Okay. Dennis, thank you very much for checking in on the Zune. I looked, and he's right. But he didn't, he didn't leave a review. So someone else was saying they listened on the Zune, and they didn't know how to leave a review. You should go to zune.net. And find Science sort of by searching for it you can. You...

Ryan: Or if you go to Sciencesortof.com, we have a link to our personal Zune page on the Find the show thing on the left hand side of the page. And you can go there and that takes you right to our page, and you can...

Patrick: So leaving a review requires scrolling down and looking on the right hand side of the page. None of us actually use zune.net for anything. So you have to actually have an account to leave a review and none of us actually have an account. Someone who does should.

Ryan: Yeah, so please give us a review on Zune if that's your desired podcasting place. And let us know if you do and we'll be sure to read that on the show. iTunes reviews are always helpful and great. That's where a majority of our listeners seem to get the show from and the iTunes reviews help let iTunes know that people are liking the show and are enjoying the show and they're more likely to promote us and what we're trying to do, get us better, better ranked up in the science podcasting area. Which is important to us because we'd like more people to listen to the show. Real quick one other thing I'd like to announce before we wrap up the show entirely is that I was lucky enough to be selected as a Cal Academy nightlife science insider which is a lot of words that people who aren't in the immediate Bay Area might not understand. But in the briefest of synopsis, the Cal Academy is an awesome Science Museum located in Golden Gate Park in San Francisco. The nightlife is a sweet program they do where they open the museum up on Thursday nights to the public, the over 21 public, where they have cocktails and special events and DJs and it's super sweet and a lot of fun. And Charlie and I have been a couple of times and we still need to drag Patrick with us one of these times.

Patrick: Yeah. The problem is the BART doesn't go all the way to Golden Gate Park.

Ryan: You just gotta sleep on Charlie's floor.

Patrick: Well Charlie's in Hawaii.

Ryan: Charlie! We're, get back here and let Patrick sleep on your floor. So, the insider program is a new program they're trying, where they get people who are involved with science, media and culture, some special access to the, to the events to help get more information for which to promote these awesome nightlife events. You know, I love museums, but as we've discussed before, babies aren't my favorite. So, getting to go to a museum without the presence of children is big thumbs up in my world. And I think you guys should all come check out these events.

Patrick: Definitely, you should definitely go find Ryan there and odds are good that the other Paleo Pals may be milling about at the nightlife event.

Ryan: Absolutely.

Patrick: So come, check it out and shake hands and say hi.

Ryan: If you do, come send us a Tweet. You know, just a tweet @sciencesortof or @Haupt or @PVWheatley or @CharlesBarnhart, and, and that'll be great. And we'll see it and we'll find you and then we also might have a little Science sort of meetup and we might try to do something in a more official capacity towards that meetup in the future. But until then, come check it out if you're so inclined. And that would be fantastic. And you can go to our website to check out the show notes and other nascent kind of proto blogging that we're testing out. So if you if you like that, let us know. And you can let us know that by leaving comments on the website sciencesortof.com or letting us know on the Facebook page or tweeting us @twitter.com/sciencesortof, or emailing us at paleopals@sciencesortof.com, and we all have personal email accounts, guys, you want to roll off those, Patrick?

Patrick: Ah, they're fairly obvious, but Patrick@sciencesortof.com.

Charlie: And Charlie@sciencesortof.com.

Ryan: And I'm Ryan@sciencesortof.com. We're also all over the internet in other ways. So just go to the sciencesortof.com website, and you can see our little personal BIOS and find out where to find us elsewhere in the big wide internet.

Hopefully you'll do that and keep listening to the show and tell your friends. Maybe you've got friends who who need some more science in their life. Right?

1:30:03

Charlie: Right.

Patrick: Everyone needs more science in their life.

Ryan: Yeah.

Patrick: The rate limiting step...

Charlie: Be sure to check out Mary Roache's page at maryroach.net. And check out her books *Spook* and *Bonk*.

Ryan: They are fine books indeed. And I think that about wraps it up for another show, Episode 33 Sex, bugs, and rock and roll. You've been listening to Science sort of I've been your host Ryan. Joining me are the Paleo Pals, Charlie and Patrick. And we will see you next week. Episode 34 for more science...

Charlie and Patrick: Sort of.

Announcer: Thanks for listening to Science sort of our show notes are available at sciencesortof.com which will have links to all the stories we talked about today. You can follow us on twitter@twitter.com/sciencesortof. You can get in touch with us at paleopals@sciencesortof.com or on our Facebook fan page. A great way you can support the show is by subscribing to our feed on iTunes and writing a review so other people have a better chance of finding the show. And if you have a friend you think might be interested, tell them to give us a try. That's all for this week. Thanks for listening and see you next time on Science sort of.

Ryan: Now we just need to go and record those old episodes word for word.

Patrick: What do you think about yetis, Ryan?

Ryan: I can't believe Disney bought Marvel.

Charlie: I don't even know what you guys are talking about. I don't even listen to those first few.

Ryan: Charlie.

Patrick: For, I don't know about the Yeti, but, but that Marvel one that was an actual, that actually was this was a story.

Ryan: Yes it was.