### **Audio Transcript: The most successful species on Earth?!**

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**Nate Hegyi:** I'm recording.

**Taylor Quimby:** Let's go for it.

**Nate Hegyi:** All right. I'm Nate Heggie.

**Taylor Quimby:** I'm Taylor Quimby. And, Nate, I am going to ask you a question I want you to answer with the first thing that comes to mind. Don't overthink it. Okay.

**Nate Hegyi:** All right. Okay.

**Taylor Quimby:** What do you think is the most successful species on the planet?

**Nate Hegyi:** Pigeons.

**Taylor Quimby:** Wow. That you didn't overthink that.

**Nate Hegyi:** I've always been fascinated with pigeons, I think. Pigeons, sparrows, field mice.

**Taylor Quimby:** Mice. Yeah.

**Nate Hegyi:** Things that are like you find everywhere. I mean, I don't know if that's actually true. Right? But, like, pigeons are super successful.

**Taylor Quimby:** Okay. So let me ask you. Did you not at all consider that humans are the most successful species on Earth?

**Nate Hegyi:** Of course. Well, I mean, it really depends.

**Taylor Quimby:** So I have been going out on the street asking friends and also random people this question. What do you think is the most successful species on the planet?

**Person on street:***Wow.*

**Taylor Quimby:** And the responses fall into two camps. The first camp is like humans. Are you kidding me?

**Person on street:***I would say humans.*

**Taylor Quimby:** Obviously humans.

**Person on street:***We're the most dominant. We're everywhere.*

**Taylor Quimby:** But the other camp is all over the place.

**Person on street:***All bees. I went with ants. Cockroaches.*

**Person on street:***Maybe a cockroach.*

**Person on street:***I don't know.*

**Person on street:***Bacteria are pretty successful.*

**Nate Hegyi:** I liked. I liked the bees.

**Taylor Quimby:** Bees!

**Nate Hegyi:** He was As a matter of fact, about bees as I was about pigeons.

**Taylor Quimby:** But if you ask these folks, what about humans? Oh, that they're kind of like, have you looked around lately? We're not exactly crushing it too much.

**Person on street:***We're we're destroying the earth.*

**Person on street:***I always feel like we could be, but I think because of how things are we, we're not in a place we should be.*

**Nate Hegyi:** It sounds like we have the makings of a very good debate.

**Taylor Quimby:** Do you think humans have been successful… as a species?

**Nate Hegyi:** Successful in the sense of like, I don't know, a Wall Street investor being really, really successful as he leads the nation towards financial disaster.

**Taylor Quimby:** Yeah, yeah, yeah.

**Nate Hegyi:** We're successful in that way.

**Person on street:**  I guess it's fairly simple. I think man is probably the worst species on this earth. When you look what we've done to it.

[theme mux]

**Nate Hegyi:** Sometimes, scientists will use a word that seems more suited for self-help books and financial advice podcasts: *Success*. Evolutionary success, reproductive success, successional species… but what does it even mean for an organism, or an entire species, to succeed? Today on Outside in we’re asking a question   that gets to the very heart of what it means to be alive. What is the most successful species on Earth?  How *do* we measure that exactly? And how do humans stack up against all of the other possible candidates?    
  
**Taylor Quimby**: Including pigeons…  
  
**Nate Hegyi:**  Including pigeons, of course. Including pigeons.

**Nate Hegyi:** And we want to know what you think. So while you're listening, please take our poll on Twitter or on Instagram. We are at outside in radio.

**Taylor Quimby:** So because so many people assume without any real debate that humans must be the most successful species on the planet. Nate, I want to start this conversation off with let's call it a challenger.

***Steve Giovannoni:*** *I'm Steve Giovannoni. I'm a microbiologist at Oregon State University.*

**Taylor Quimby:** So Steve is the guy who discovered one of the simplest but also most remarkable organisms on the planet.

***Steve Giovannoni:*** *It was way back in the nineties, early nineties, that we started cloning genes out of seawater to find out what kind of cells lived there. One of the first cells we encountered was a little bacterium.*

**Nate Hegyi:** Does this little bacterium have a name?

**Taylor Quimby:** It does. It's called SAR 11.

**Nate Hegyi:** This isn't a Covid story, is it?

**Taylor Quimby:** No, no, SAR 11 is actually what you and I would call a plankton.

***Steve Giovannoni:*** *And people will ask, well, how did you give it the name SA 11? The answer is it was the 11th clone from the Sargasso Sea.*

**Taylor Quimby:** So Plankton, I just recently learned it includes any of the tiny lifeforms that drift around in the ocean. So it's not just like plant plankton, or animal plankton, but there's also fungi plankton and bacterial plankton. It's just anything that's kind of a drifter, really.   
  
And SAR 11 is among the smallest single celled organisms in the ocean. It looks like a teeny tiny worm under the microscope, and it lives off of dissolved carbon in the water around it.

***Steve Giovannoni:*** *At the time we knew nothing about it, but subsequently we found that it's really the most abundant thing in seawater and on the planet.*

***Taylor Quimby:*** *Most abundant. I mean, is there a way of measuring that?*

***Steve Giovannoni:*** *Yeah, let's see. It's about ten to the 28th cells.*

**Nate Hegyi:** That means absolutely nothing to me. I mean, it sounds like a lot.

**Taylor Quimby:** 10 to the 28th power is in the octillions.

**Nate Hegyi:** I don't even know what an octillion is. That's, like, too big of a word for me.

**Taylor Quimby:** So if you took a trillion, and multiplied by a trillion, and then multiplied that by 10,000. It’s something like that.

***Steve Giovannoni:*** *So that's more than the number of stars in the sky. Think of it this way. If a teaspoon of water might have 100,000 of these cells in it, that's how abundant it is. And it's everywhere, from pole to pole and from the surface down to the bottom of the ocean.*

**Nate Hegyi:** So this is.. this is like, is this the most successful organism on the planet? Do you think? Because it's the most abundant?

**Taylor Quimby:** Well, that's partially the question.

**Nate Hegyi:** You know what the first question that comes to my mind is like, what do they do? What do they do that we don't? Which is a stupid question. It's a silly question. I was like, sure. I guess they're successful in terms of like there's a lot of them.

**Taylor Quimby:** Yeah. Well, I think this gets to the point that you have this idea what's the most successful? And as soon as you really approach it, you have to decide what are the metrics you're looking at? Like What is the point, right? What is success? And if we are looking just at numbers, then you know this, this is the winner.

So Steve says:

***Steve Giovannoni:*** *To an evolutionary biologist. The definition of success is reproducing your genetic material. And so every single cell has a copy of its DNA.*

**Taylor Quimby:** And his point is, it doesn’t really matter how big the package is - if reproducing your genetic material is success, SAR 11 knocks it out of the park, no matter how small these teeny, tiny cells are.

**Nate Hegyi:** Hey, question for you. Yeah. I mean, do they live pretty harmoniously in their environment or do they take over places and, you know, like choke places out? I guess I'm thinking of, like in the plant world, algae blooms and things like that. Do they become invasive?

**Taylor Quimby:** No… really the reason they do well is because they're like, they've like evolved to just exist.

**Nate Hegyi:** That's great. They figured it out and they don't even have brains.

***Steve Giovannoni:*** *It's just like with a virus, the virus that kills its host doesn't go very far. So the long the long term road to success for all organisms is to is to fit into the ecosystem, to have a stable niche.*

**Taylor Quimby:** So Steve is inclined to think numbers are important because, well, he studies microbiology - and I think it’s a point of pride for him.

And when I called him, he told me that he had actually just been having this argument with a colleague.

And as they talked about it, it became obvious that there are other metrics that we should be taking into consideration as well.

***Steve Giovannoni:*** *So the question came up. You asked about the recent lunch I had where we discussed this, and there the issue came up, were dinosaurs successful? They were incredibly successful for a period of time. And then one big asteroid impact wiped them out. And so they became very unsuccessful.*

[sound of meteor impact]

*So were they successful or not? And I would argue that success is numbers, but it's also numbers averaged over over time.*

**Taylor Quimby:** Okay. So we should talk about time.

***Rashidah Farid:*** *It's not just simply a numbers game, right? It's not the size of the population is the longevity of the population.*

*Most importantly it’s the ability for that population to adapt to environmental changes, so they can maintain a sustainable longterm population.*

**Taylor Quimby:** This is Rashidah Farid, by the way. She is a wildlife ecologist at Tuskegee University. And for her dissertation, she spent a lot of time studying prairie dogs.

And one thing she told me is that these two metrics for success - numbers, and longevity - don't always go well together.

Nate Hegyi: Ahh… You mean that having a big population isn’t always a good thing.

***Rashidah Farid:*** *Let's say you had a huge colony of black tailed paradox. Okay. It's a colony of over 100.*

**Nate Hegyi:** Cue  the prairie sound effects.

**Taylor Quimby:** What is a prairie sound effect? Is it crickety?

**Nate Hegyi:** It depends on the the season. But let's say summertime. It's going to be crickety, buggity. It's going to be windy. Yeah.

***Rashidah Farid:*** *And so everybody's breeding. Everyone's happy. They've been there for 30 years. This colony.*

**Taylor Quimby:** Do prairie dogs make a sound?

**Nate Hegyi:** They do. Chirp. Chirp sounds.

**Taylor Quimby:** Cool. So let's say this prairie dog town is in a valley. So there's mountains and rivers, and they're somewhat contained in that way. And so as it grows, all these prairie dogs are getting closer and closer and closer together.

***Rashidah Farid:*** *And so a very successful population with high density and we think that's a good thing. They have lots of numbers. They're more successful. It's actually more vulnerable to a slight environmental change or disease, and therefore it spreads very fast and contagious like COVID. It wipes out the entire population.*

**Taylor Quimby:** Whereas a smaller colony, right, they might be more spread out, so they still get hit, but enough of the population survives that they recover.

**Nate Hegyi:** Right. Like I happen, this isn't just some random hypothetical idea. I mean, prairie dog colonies in the West sometimes get completely destroyed by bubonic Plague,

**Taylor Quimby:** Which is a big deal, right? Because aren't prairie dogs the sort of animals that lots of other animals rely ? Like, aren't they basically the, you know, the Cheetos of animal.

**Nate Hegyi:** Yeah. That the chicken McNuggets is. So I know it was explained to me for the black footed ferret, which is this very, very rare, very endangered species out on the prairie.

[mux]

**Taylor Quimby:** So in terms of longevity… … one might argue that horseshoe crabs, or crocodiles, or even ginkgo trees - are the most successful species on Earth.

Not because they have huge big population sizes, but because they’ve had stable populations that have the survived ups and downs of the planet and at this point have been around for hundreds of millions of years, right?

**Nate Hegyi:** Crocodiles survived the impact that killed the dinosaurs. That’s pretty impressive.

**Taylor Quimby:** More impressive than the dinosaurs.

**Nate Hegyi:** Yeah, dinosaurs kind of blew it. Going off and dying like that.

**Taylor Quimby:** Failed. Wait, what… trying to remember, Mortal Kombat, how did it go?

**Nate Hegyi:** Yeah, what was Mortal Kombat?

**Taylor Quimby:** Fatality!

**Nate Hegyi:** Finish him…

**Taylor Quimby:** [laughs]

**Nate Hegyi:**  Has Sar 11 been around a long time?

**Taylor Quimby:** Can’t say how long exactly, but the group to which it belongs goes back about a billion years, give or take.

**Nate Hegyi:** Oh wow.

**Taylor Quimby:** Yeah. On the other hand, where do you think humans stack up on this one? On longevity?

**Nate Hegyi:** Oh, I mean, look, we've barely been around. You know, if we're looking at like geological time. I mean, we're just a little beep, just a little, you know, blink on the radar. So. I don't know. What do you think? Do you think we're we're doing great when it comes to longevity?

**Taylor Quimby:** I just think it’s too soon to say.  It's like, if you were to ask which was more successful - America or the Holy Roman Empire? I’d be like, I’ll let you know in 600 years or whatever.

**Nate Hegyi:** Yeah, the jury is still out.

**Taylor Quimby:** But you know, a lot of people might say - it’s not looking good.

**Taylor Quimby:** Dr. Farid said if there were an alien biologist like a martian was looking down at earth and studying humans, they'd probably be talking about us the way we’re talking about prairie dogs.

***Rashidah Farid:*** *The Martian might say that we probably should have slowed down a couple of hundred years ago and paced ourselves because we are fast moving towards the cliff and we all know an ecology. When you move towards that carrying capacity, things just go downhill from there. Disease. Limited food resources. Health declines. It's a very uncomfortable way of thinking about humans because we are human.*

**Taylor Quimby:** It sounds like a fun exercise in the beginning, but it might end up being a little depressing when you really get down to it.

***Rashidah Farid:*** *I think so. I think it is quite depressing.*

**Nate Hegyi:** Sorry. Humans longevity. Not our not our strong point.

**Taylor Quimby:** But she says that so happily that I yes, she does.

**Nate Hegyi:** She does. She's like, it's depressing. But also, isn't it interesting?

[mux]

Up next, we take this question and spin it. What does success look like for us.

*Steward Pickett. Humans do have this material success and we have spread all over the world and established vibrant cultures in every place that you can even vaguely inhabit.*

**Taylor Quimby:** But first… vote. Vote, vote, vote. Vote for the thing that we’re putting on the social medias.

**Nate Hegyi:** What’s the most successful? Even though that’s a really hard question for a very complicated answer.

**Taylor Quimby:** And to find out what people have to say, subscribe to our free newsletter - there’s a link in the show notes.

**Nate Hegyi:** Be right back.

**BREAK**

**Nate Hegyi:** I’m Nate Hegyi, this is Outside/In, welcome back - producer Taylor Quimby is with me, asking us to consider - what is the most successful species on the planet?

Taylor, where do things stand right now?

**Taylor Quimby:** Okay. So let's say shear numbers goes to SAR 11. Jury's still out on longevity, but. But bonus points for horseshoe crabs and crocodiles. Yeah. But let's be honest here, because speaking of Mars, human beings are the only species I know that have a shot at intentionally colonizing other planets. Like we. We do something special. We spread.

**Nate Hegyi:** Yeah, very far.

***NASA clip:*** *Nine. Ignition sequence starts. Six.*

***Steward Pickett:*** *People talk about colonizing species being successful.*

**Taylor Quimby:** So this is the third scientist that I bothered with an absurd question. His name is Dr. Stuart Pickett. He's an urban ecologist at the Cary Institute for Ecosystem Studies.  
  
And he says the word “success” is sometimes in a botanical context  in very specific ways.

***Steward Pickett:*** *Some exotic species introduced species may be considered to be successful if they become naturalized and begin to spread.*

**Taylor Quimby:**They’re considered successful if they become naturalized and begin to spread.

So again he’s talking about plants here, and I acknowledge that colonization has a lot of baggage outside of that context  - BUT if you if you take just that  criteria that he's talking about, I think I think humans are pretty much killing it.

**Nate Hegyi:** Yeah, maybe. I don't know. Maybe.

**Taylor Quimby:** All right, Nate, there's a Wikipedia entry that I think makes this point very well. Would you click on this link? Yes. So? So this is the the Wikipedia article for human.

**Nate Hegyi:** Humans are one of the most adaptable species, despite having a low or narrow tolerance for many of the Earth's extreme environments. That's a that's that's pretty good.

**Taylor Quimby:** We, like, a naked ape, can live in the Arctic.

**Nate Hegyi:** Yeah. And, like, enjoy it.

**Taylor Quimby:** And enjoy it. [laughs] That's key. That's clutch. All right, skip to the next graph just for a sentence here.

**Nate Hegyi:** Within the last century, humans have explored challenging environments such as Antarctica, the deep sea and outer space.

**Taylor Quimby:** I think these are all very compelling points that this Wikipedia page is making.

**Nate Hegyi:** I mean, I definitely feel better about us. You know, we have culture. We have I mean, we created music. You know, that's amazing. We've done a lot of really, really neat things.

[sound of rocket taking off]

***Steward Pickett:*** *You know, in general, yes, humans do have this material success and we have spread all over the world and established vibrant cultures in every place that you can even vaguely inhabit.*

**#TQ:** BUT…

**#NH:** I knew there was a “but” coming.

**#TQ:.** So I was talking about spreading, colonizing… You brought up this thing that a lot of people want to talk about when it comes to humans being special.

Our culture.

But when we start oohing and ahhing over music, and art, and philosophy…

 We’re projecting our OWN sense of success onto animals for whom those things are not important.

**#NH:** We’re not comparing apples to apples.

*Steward Pickett: And that may be a little dangerous because we're expressing intentionality, we're expressing sort of social decision making. And that's not what's generating the success of Norway maple or the nutria or something like that. It's something much more sort of it is material, but it's it's not it's not culture.*

**Taylor Quimby:** And to be fair to Steward Pickett - who was kind enough to bat around the idea of what makes a species ``successful” with me - he ultimately thinks the premise of the question is flawed.

*Steward Pickett:  I mean, what's the ideal species? There is no ideal species because each species might have an ideal place, an ideal situation. And those are scattered all over the place, all over the world, all over your continent or whatever.*

*Taylor Quimby: Hmm. Yeah.*

*Steward Pickett:  what I want to really do is change the question and make it and make the question be. What kinds of situation? Will any species be successful in?*

***Steward Pickett:*** *One of the things we get from the big overarching ideas of evolution is there is no purpose, there is no purpose, it's not progress. It's just staying in the game and being able to adjust when the game changes. That's all there is.*

*[mux]*

**Taylor Quimby:** So when I asked scientists to define success at the species level, you know, they talked about population numbers and longevity and evolution and adaptation. But I thought it was really interesting because when you ask these same scientists, how do they define success as an individual?

***Rashidah Farid:*** *Oh, gosh, why did you ask me this?*

**Taylor Quimby:** The conversation goes in just a completely different direction.

***Rashidah Farid:*** *And then I have to be honest about it, too, right.*

***Steward Pickett:*** *You know, there's a certain amount of just sort of being being happy and engaged in some part of the world.*

***Steve Giovannoni:*** *The balance, the fun part of the work with everything else in life is that's actual, real success.*

***Rashidah Farid:*** *I adore mentoring. I adore that is my legacy.*

**Taylor Quimby:** Okay. So that last voice again is Rashidah Farid, who I should mention when we spoke, she just had a baby like we like and I mean, like weeks before we talked. And also, her father had just recently passed away. And and because of that, I think I caught her at one of those big transitional times where, you know, people are are actually trying to evaluate, like, who am I and what does success mean for me?

***Rashidah Farid:*** *But my father passed this past May. I'm so sorry. So thanks. And so I think about him quite a bit. He was very interested in in my life. And he had this phrase just be. And, you know, if you think about all the things you go through as a student, a graduate student, you know, the tough the tough exams, tough advisers, all the difficult things. You know, I'm a black woman in ecology, so you think of all the internships and harsh environments that I put myself in and to come out on the other side and still be my whole self, the person who I am fundamentally, when I was just 15 years old in rural, backward Alabama, if I could just be who I am and still be able to do that as a professional, that is success, right? To come through all of those things I wanted to achieve and still achieving and still be who I am fundamentally and very true to myself. That is sense.*

**Taylor Quimby:** So here's my question, Nate. Why is it that when we're evaluating success of other species, you know, we're talking about all this. Scientific stuff. But when we look inwards, we start talking about something much deeper and harder to understand. Like like you don't look at an animal and say, like, is that animal being its authentic self?

**Nate Hegyi:** Yeah. You don't look like a caribou and being like are they being true to themselves? Yeah, that's a great question. I think it comes down to the fact that we see animals as others and. Well, let me think. Let me think. How do I answer this?

**Taylor Quimby:** So even though I thought Rashidah had a really beautiful and sort of uniquely human answer to this question about success in our conversation, she was also really clear that she does not think that we are as special as we might want to believe.

***Rashidah Farid:*** *The human aim animal is not separated or somehow not applied to the same standards of nature. We are creatures of nature, right? And so.*

**Taylor Quimby:** We don't get our own, our own completely different set of criteria for how.

***Rashidah Farid:*** *We think about things. No, no. The laws of physics don't change for humans. The laws of nature don't change either. The endgame for humans, if they're successful, is still the same. It is ultimately the passing of genes. Right. I'll give you an example. So when I was doing my masters in my Ph.D., I'm from a very large conservative family in rural Alabama. Sure. So my father would call me almost for 18 years straight every Mother's Day and wished me a happy future. Mother's Day.*

***Taylor Quimby:*** *Oh, wow.*

***Rashidah Farid:*** *It's not it's not because he didn't have grandchildren. I have six oldest siblings. It has nothing to do with that. But in his mind, and traditionally within the culture of most humans, for the last, I don't know, four or 500 years, success is measured by have you started a family and had children and therefore passed on your genes, your traditions and your values. Right? So it's a little bit more complicated, but ultimately it is comes down to the same, the same the passing of the genes.*

**Nate Hegyi:** That's yeah, that's really interesting. Well, it's like there's two things here because the question that keeps popping up in my mind that we haven't even talked about is religion at all. Right? Because if you were to talk to a religious person about what what is success, what is meaning in your life? You know, I think you'd have a totally different ballgame, right? It's like, have I been you know, have I have I lived a.

**Taylor Quimby:** Good I've been faithful to God.

**Nate Hegyi:** Yeah, exactly. Have I been faithful to God? Am I walking in the path of Christ or. Or what have you? That's really interesting. It comes down, I guess, a little bit culturally.

**Taylor Quimby:** The other thing that’s interesting about humans is that we don’t just use genes to pass things down…  So, for example, like writing a book, writing a memoir, passing down your values through teaching and like these are in some ways unique human things that we are able to do, like to to be remembered, to have a legacy that is not just genetic, like that is a thing that human beings can do and that some people I think that is their idea of success versus yeah. Having like 11 kids, right?

**Nate Hegyi:** That I exist beyond the footprint of my life.

**Taylor Quimby:** It's a big it's a hard one, right? I mean, what is success? What does success mean to you?

**Nate Hegyi:** Oh, man, what a success mean to me. Success means to me that I'm happy every day, that I feel like I'm either bringing joy or taking deep. I don't.

**Taylor Quimby:** Know. So it's not it's not reproducing your genome is what your…Success to you isn't...

**Nate Hegyi:** About spreading. No, no, no. Yeah. No, it's definitely it's it's personal stuff, right? It's like. It's like for me, I think success is happiness. Are you happy? At the end of the day, do you do you feel like satisfied? Do you feel like the work in your life brings meaning and that meaning, you know, meaning to others? I guess that's that's success to me. It's small stuff.

**Taylor Quimby:** Yeah. The thing about this is that I really actually like the idea of trying to evaluate this with literally anything but humans. But humans are the only thing that we can try and evaluate happiness.

**Nate Hegyi:** Whether they're feeling successful.

**Taylor Quimby:** Whether or not they're happy, whether or not they're content, whether or not.

**Nate Hegyi:** They. Yeah, I think a little bit. I think that there's still you can definitely see signs of depression in an elephant or, you know, a dog. But we also don't determine, like, you know, my dog's being really successful because he's happy, you know, like there is a separation in terms of like what we consider success to be as a species versus an individual. I think I don't know. This is like this is a tricky this is a tricky one that you're kind of bringing up.

***Rashidah Farid:*** *And when we begin to acknowledge some of these cognitive abilities and other species, you can't help but then go down the rabbit hole of do they appreciate things simply for beauty? And that changes our entire perspective of how we see wildlife and nature around us. Perhaps other species have measures of success beyond reproduction and survival, too, but because of our own biases as humans and the way we view things and our desire to be very special, which is normal, we haven't really allowed our brains to even fully explore some of these concepts. But I think it's a beautiful thing, even just to think about it. I think it's a beautiful thing.*

**#NH:** So… what species is the happiest?  Is that our last hypothetical metric?

**#TQ:** Yeah.

**#NH:** Could be dogs. They seem happy.  
 **#TQ:** Could be dolphins. They seem like they’ve got a pretty good outlook on life.

**#NH:** I mean, when they’re not dodging fishing nets.

**Taylor Quimby:** Well, you know, this isn't a question that we can answer. Right. But but there's two things I want to leave you with Nate here. One is a positive way of looking at the world, and the other is a story that really creeped me out. So first, the positive thing.Doing this story, I have realized that every living thing on Earth today - we’re all related to each other, through countless generations…  and so in a way we each of us an evolutionary success story, both as individuals and as a collective family of living things.

**Nate Hegyi:** Right, right.

**Taylor Quimby:** We've all succeeded.

**Nate Hegyi:** Bottom line, we are alive and we exist right now. Is a miracle. Enough. Yeah. What's the what's the what's the the the sad story.

**Taylor Quimby:** The creepy story. Yeah. All right, so remember, remember Sar 11?

**Nate Hegyi:** Yeah.  
  
**Taylor Quimby:** Most abundant lifeform on the planet, right? Well, in 2020, researchers are studying this tiny, tiny cell, and they discovered a tiny, tiny, tiny, tiny virus that lives inside it.

**Nate Hegyi:** Oh, no. Uh oh.

***Steve Giovannoni:*** *Yeah. These viruses that that infect these cells are the most common viral virus type on the planet. So in a sense, you could say they're more successful than their host. I'm sure there are more COVID viruses on the planet Earth than there are humans. So right now, I guess you could say COVID was more successful than us.*

**Nate Hegyi:** Taylor, You said this was not going to be about COVID.

**Taylor Quimby:** It's not. It's just the ending! It's just creepy. I'm sorry.