

# Aperiology with Joseph Saunders

## Ologies Podcast

### July 14, 2020

Oh heeey, it's that older guy at the beach, watching the sunset, who claps when it's done, Alie Ward, back with a very, very giddy episode of *Ologies*. Up top, I wanted to let you know: this guest has a website now! ParaHerpetologica.com - the link is in the show notes. So if you want to be looking at any of his photography while we talk, you can go to that, or to his Instagram which is in the show notes. Also you can buy his prints on his website! Thank you to Kyle Sleeper of Now Labs for putting that together.

And the guest also has a Patreon. It is linked in the show notes, you can directly support his work and see all kinds of unreleased photos and behind the scenes. So go to his website, follow him on Instagram and support him at Patreon.

Okay, on with the intro! Thank you to everyone who keeps *Ologies* up among the science goliaths in the podcast charts by making sure you're subscribed, by rating, by of course reviewing the show - I read all of the reviews - I pick a hot, steamy, fresh one each week to read, and this one was from plex091 who says:

*Ologies makes me feel like I'm in the best classroom discussion on a rainy day with a sub!*

High praise, I appreciate that! Also hello to MajesticWerm and Whyd0in33an!cknam3, who both drive delivery trucks and are tuning in.

So let's keep these good vibes rollin' with Aperiology. And it just didn't have a specific ology. I looked at every corner of the internet for one! It didn't exist. But this guest is someone you heard on the BlackAFinSTEM episode we did last month and I love his work so much; I just wanted to know more about his wildlife macro photography process. He has so many fans who are *Ologies* listeners.

So I asked Patreon what ology this would even be, and Zoltán and Sarah both suggested 'nature-picture-taking-ology'. Rob Hover offered 'Wildlife Portraitology?'

Emily's dad and Rachel De Gouff both said 'closeupologist...?'; but then Patron Ellen Silva suggested 'Aperiology', from the Latin *aperio*, meaning to open or reveal. And Ellen wrote of this guest's work that, "these photos certainly reveal a world of detail." Also, bonus; I was like, "Yessss! *Aperio* and aperture of the camera - also opening different spaces, both physically and culturally, for more people to be included. So yes- Aperiology it is. Thank you Ellen!

A word was coined just for this episode: never before have we done that on *Ologies*! I'm usually very strict that the ology exists elsewhere but this one is just a very rare, special occasion and I'm thrilled that there is now Aperiology.

So we're going to be chatting about the magnificent art and science, which you can see on his website - again, ParaHerpetologica.com - linked in the show notes. Sidenote: A macro photo is, technically, one in which the size of the subject on the film or the image sensor is life size or larger. So, his artwork is larger than life, scientifically speaking.

His Instagram @reelsonwheels is a gallery of pensive praying mantises, and dead-on stares from beetles, the cutest spiders with most cartoony eyes, and more. As a lifelong bug lover, I was hooked on his work as soon as I saw it! He now has 13,000 followers on Instagram, most of them just from the last few weeks, and it's climbing so fast. I wouldn't be surprised to see him break 100k in the next few months, so follow him on there.

And also, by chance, this episode coincides perfectly with Disability Pride Month, as we celebrate the July 1990 passing of the Americans with Disabilities Act. So let's celebrate that with a glass of iced tea and listen to his process, his relationships with animals, why we should appreciate the slithery, the scaly, the buggy, the leggy creatures, lenses, cheap gear hacks, which spiders are the cutest, his macro photography mentors, the best places to photograph inverts, and more. Also, you may hear some beautiful chirping in the background and you have to listen to the whole episode to find out what kind of bird it is; just think of it as a lovely 'hello' from nature. So get ready for your eyes, and ears, and world to open with the wisdom and creativity of wildlife photographer, and the world's first ever Aperiologist, JDmonroe online aka Joseph Saunders.

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**Alie:** I'm so excited to talk to you! I feel like you're my Ansel Adams; you're like my Annie Leibovitz, like, my favorite photographer, so this is kind of a big deal.

**Joseph:** *[laughs]*

**Alie:** I need to... I'm going to have to play it much cooler than this because I'm seriously so stoked to talk to you. How long have you been doing photography? Did you like the outdoors and nature first, or did you like photography first?

**Joseph:** I have always been a herper at heart. I grew up in San Antonio, Texas - also just a quick aside - I was originally born in California.

**Alie:** Ooh!

**Joseph:** I don't know if you're from California, but I realize you're out that way.

**Alie:** Yeah!

**Joseph:** I was born in a Travis Air Force Base in Fairfield.

**Alie:** No way! I know exactly where that is! How long were you out in California before you moved to Texas?

**Joseph:** Not long enough to have any awesome memories. I think I moved from California when I was about three, so I really don't remember any of it. My upbringing really resides mostly in San Antonio and a little bit in Phoenix, Arizona. In San Antonio, Chelsea - one of the other members of BlackAFinSTEM - she studies anoles, and that was my spark animal.

**Alie:** Ah yay!

**Joseph:** The green anole got me completely obsessed with reptiles, amphibians and all that stuff. They're everywhere in San Antonio. Green anoles and Mediterranean geckos. Like, I go back to my brother's, who still lives there, and I cannot wait to get there because I just start searching around his house looking for anoles so I can show my nieces and nephew.

**Alie:** Of course growing up in the desert in Arizona and San Antonio, that must have been the best kind of animal to see, was lizards.

**Joseph:** So the crazy thing is - and I slap myself every time it comes to mind, but I also have to remind myself of the reasons to be grateful - I was not really involved in herpetology or herpetoculture in any kind of way when I lived in Arizona. I went to high school in Arizona; my mom got stationed at Luke Air Force Base. I'm so grateful for it because the friends that I had there, they were the generation that followed a lot of the conflict between the War on Drugs and the history surrounding that in Oakland, California.

A lot of them left Oakland seeking a better life. And they taught me so much about Black life that I had no idea, because one; I was raised by white parents, my biological mother is white, and also in the military. So, we're like completely cut off from the realities. Our entire bubble is just Air Force. That was my coming-to-reality moment, was my friendship with them. I'm so grateful to them to this day because they opened me up to learn so much more about Blackness, about the justice issues that we are facing now, and there's no way I could've been the person I am now without them.

**Aside:** Joseph moved to Phoenix at 15. It was there that this community, many people who were driven out from Oakland and the Bay area because of the racial underpinnings on this so called "War on Drugs," opened his eyes to his own culture.

He also recalled a close friend who, when they were just teens, was brutally assaulted by two police officers after just walking into a convenience store in a white neighborhood. And Joseph says that was a moment when he really had to face the reality of the disparities between how Black people and white people see the issue of racism, through their own lenses. And his white family didn't always understand. But he made friends who did.

**Joseph:** You know the great thing is, while the military... Growing up a military brat, it did grant me my best friend, who I very, very firmly say is my brother, because we were in kindergarten together, and we've been together ever since. He was the other Black person that I knew that liked animals, and the weird ones, as much as I did. Like, we were in kindergarten and we would have library days where we would go from our classroom over to the library and he and I would basically barter over which one of us got to read the snake book, the spider book, the shark book. And it was like, "Okay, you take this one this week and you take this one this week." And then we'd switch.

We read the same ones over and over again! I can still picture some of the photos. One of them, I think the spider book had a trapdoor spider on the cover of it. I am so grateful for that because... They're my family, and we go back to San Antonio every year and spend a week together with my three nieces and my nephew and that's my family. That is my very, very Black family. Also, now I have BlackAFinSTEM, and that is... I have my family and now I also have this amazing Black naturalist community. So as much as my relationship with my relatives on my mom's side... as hurtful as that really, truly was, I have the support. I have the foundation that I need to be able to go forth and continue.

**Alie:** So you start liking animals maybe before photography?

**Joseph:** Oh yes! So, I had to hop on my own Facebook page real quick because I didn't actually start taking photos with any sort of seriousness until 2014.

**Alie:** Really!?

**Joseph:** Yep!

**Aside:** Really? I would've thought it was a lot earlier, because you're really very good at it! What was it? Did you start taking iPhone pics or did you start by getting a camera and just taking it out whenever you go looking for herps?

**Joseph:** So, I'm almost ashamed of this because of my circle of influence now; what got me into this is that I found out about people who breed various, high end morphs of ball pythons when I was in college. And that's what I do now, that's my own business. I'm regularly employed, I have my own employer, but my own small business is I breed ball pythons.

**Alie:** Oh my god! That's awesome!

**Joseph:** So what I found out was... I was like, "Okay, so how do I actually take good photos of my animals to make sure that I'm doing good advertising?" And someone was like, "You need to get a decent camera!" And then somebody said one time, "You need to get a decent macro lens," because baby snakes are small. You gotta make sure that, you know, you get the right equipment. I was like, "All right, cool." So, I got an old Canon T5i back in 2013, I think, and I think it sat on the shelf for a good, long while because I didn't know what to do with it.

And after someone mentioned the macro lens I got the Canon 100mm. And I went, and I was running around the park and playing with it. I realized I could fit a cricket's head in the entire frame, [*"Jiminy Cricket!"*] and my mind just exploded, and I have just been going completely nuts ever since. I was just like, "This is too much fun! Bugs are everywhere!" It's not that it's easy, but it's that it's accessible. You don't have to hike miles to find some sort of a rare species. It's, "What can you find in your own yard, and how can you present it in such a way to change someone's mind and opinion about something that most people just stomp on without a second thought.?"

That ties back into my earlier impression as a herper. A big part of it was the recognition that... this being before becoming more confident and understanding in my Blackness. I've been disabled since birth, I have spina bifida so I've used a chair all my life. So, I've always felt empathy and some connection when it came to reptiles for a sense of not fitting in, for a sense of, kind of, persecution. Not being 'enough'. So, I really attached on to reptiles for that reason. Like, snakes especially, because I would grow up as a kid watching, like, documentaries, and the various facts, and David Attenborough talking about reptiles and this and that. [*David Attenborough: "This is a horned lizard; and very beautiful too."*]

What always stood out to me most was a few things; one, how tough scales are. You know they basically are just this form of armor that allows them to be able to withstand bites from their prey or other predators, and so on so forth. It gives them this layer of protection. Another thing, that they can go weeks, maybe months, without any water. Months if they have an adequate source of food, and since they get about 70% of their water from their food that they eat, they survive it.

You know, you can put them in... like sidewinders in Arizona or horned vipers - stick them out in the middle of the desert and they're fine. [*clip from Curb your Enthusiasm: "Pretty good! Prettyyyy prettyyyy prettyyyyyyy-pretty good"*] And I looked upon them as an example of resiliency; an example of how to be tough, how to survive, how to not just survive based off what other people perceive as your limitations, but also how to survive when everybody else is against you.

**Alie:** If you're feeling overlooked or underestimated.

**Joseph:** Right.

**Aside:** How beautiful is that? The answer is: very beautiful.

**Joseph:** So, that connection for me and reptiles, I think that's why it's been the one thing that's never gone away. I used to love sports - I still love sports, but I haven't touched a basketball since 2012. I spent my time playing ball when I was in my 20s, but I just keep coming back to reptiles. And now the same kind of relationship and perspective still applies when it comes to invertebrates because nobody gives a damn about them. You know, they get in the house and people... It's some big thing for people to... They think

that it's some great thing that they don't kill insects; that they would catch them and release them. That should be the norm.

**Alie:** Yes! There's so few that can actually hurt you. There's so many shower spiders that are just... they just wanna hang out in the corner. Just let 'em out!

**Joseph:** Right.

**Alie:** But what you do, the way that you photograph these creatures... Number one; your field of focus is so shallow, so crisp, it draws you in. It's just magnetic because what's so crisp, your eyes just feast on. Then the backgrounds are so obscured, they're just dreamy, and it's so easy to focus on the subject because of that really super shallow depth of field. What kind of gear do you have to bring? Do you have a tiny, tiny little studio, that's like a seamless, that you put them on? How are you capturing these images?

**Joseph:** So, a lot of what I do is actually in the field. Sometimes if I find something that's around the house, I'll take it inside. So I'll catch it, wait until it settles down a little bit, it gets a little bit desensitized to me, and then I'll proceed with photographing it. Otherwise it's in the field.

**Alie:** Has it taught you a lot about the ecology because you tend to see the same animals in certain spots?

**Joseph:** Yes! It's funny that you mention that because within BlackAFinSTEM, I'm like the undisciplined, low credential variety out of all of them. They're all working on PhDs and this and that, I'm like, "I got a bachelor's degree in Sociology."

**Aside:** At this point I was like, "That doesn't mean you don't know your shit!" And he was like, "Yeah, no no no, I know. I'm kidding." But he was, like, polite about it.

**Joseph:** My hobby and what I do, it does teach me a lot about the ecology. Like I can name about every species of jumping spider in the state of Oklahoma.

**Alie:** [giggles]

**Joseph:** Definitely all the herps; I can identify all of the frogs and toads in Oklahoma by ear. And this is just things that you pick up as a habit because you do this all the time. If you don't learn this doing what you do, you're *trying* not to.

**Alie:** [laughs] What kind of apps or field guides do you tend to rely on more?

**Joseph:** Well, I have a few field guides now; most of them are herps. I have a couple of bird guides now. I think I have a Sibley bird guide, and I have a general insect guide as well. But honestly, I use BugGuide.net a lot. That's a really good source when you have photos and you're trying to identify whatever the invertebrate that you found is. The biomass and biodiversity of arthropods is just so insane that you have to be patient with yourself. You can't expect this level of expertise unless you are really diving into a specific family or genus of a group of animals.

And you misidentify stuff often, and that's perfectly fine because in entomology, people will correct you. That's part of the culture, that you accept correction. There's nobody that gets really too upset about it. It's just like, "No, it's that," and it's like, "Oh, okay thanks!"

**Aside:** Joseph has met a ton of naturalist friends online, but he does most of his shooting in Oklahoma City, where he lives now. He told me that while Oklahoma prides itself on being the 'reddest of the red states', one great thing about Oklahoma is that a lot

of people don't realize that it has, per capita, the most historical Black towns than any other state.

And you may, of course, be familiar with the history of Tulsa's Greenwood District, which was also known as Black Wall Street. That was the site of the Tulsa Race Massacre of 1921. He told me Oklahoma's diverse population is partly the result of the Trail of Tears that forced Indigenous people off their lands and other traumatic relocation practices from the Old South. But he went to college there and says at the time he was eating and sleeping and breathing basketball. But in all that time, he maybe only had three Black teammates. And I asked why he thinks that was.

**Joseph:** Black people are severely underrepresented in wheelchair basketball. At least they were at the time I was in college. It's now been a while. Anytime you look at something, if there is a representation it's a pretty safe to bet to at least start to consider that there's some discrimination involved there. It's a matter of diving down into root cause analysis. Like my case with spina bifida, I know Black children are much more likely to have spina bifida, and this normally is a result of the medical neglect of Black mothers. Spina bifida is something that occurs due to a deficiency in folic acid that happens in utero. Very avoidable, and it's not avoided when expecting mothers aren't taken care of. Which is why it happens more often in Black children, because Black women don't have as good an access to adequate medical care.

**Aside:** Side note: That is, tragically, a gross understatement. The Centers for Disease Control released a report in September of 2019 and it opened with this bold very heartbreaking statement:

*Black, American Indian, and Alaska Native women are two to three times more likely to die from pregnancy related causes than white women. This disparity increases with age.*

I'm sorry that their language is not more inclusive of non-binary and trans men who can have babies. But it continues:

*Most pregnancy-related deaths are preventable. Racial and ethnic disparities in pregnancy-related deaths have persisted over time.*

**Joseph:** Also, when you go to just the histories of redlining and the ghettoization of America also playing into medical care and the proper medical care of these disabled children, what then becomes the opportunities and the accessibility of these children to find adaptive sports opportunities?

My mom was in the military, so I didn't have to deal with a lot of those struggles. I mean, something obviously happened with the care that my mom received even from the military standpoint as far as medical care is concerned. But growing up ultimately middle-class she was able to find resources and outlets for me that centered disability. Now, there's the next part where... Well, I had to learn to center Blackness for myself. It's not something that I could have ever learned from her. So now it's a matter of dealing with both of those things because I am Black and I am a paraplegic *all the time*. I can't be one or the other before the other. I am both at all times.

**Aside:** What was it like to get to know the folks from BlackAFinSTEM, who have been personally making my timelines one-million percent better since they launched Black Birder's Week in late May?

**Alie:** How did you get introduced to them? What was that like for you?

**Joseph:** I'm actually one of the newer members of BlackAFinSTEM. I think that I came in around February. It was Alex Troutman that brought me in. He had a post on Facebook about not looking like a scientist because he's Black. And he, kind of, dove into this long piece about, "I'm still a scientist, Blackness ain't got nothing to do with it. I'm a Black scientist." And that went viral. I wasn't friends with him, but I saw that and was like, "Hey! We should be friends!" He hit me back and he was like, "Did you know about this group meeting?" and I was like, "I had no idea. What's going on?"

So, he let me in and then I realized there were some familiar faces in there, like Karl Guyton, the croc guy - I think I've been friends with Karl, actually, longer than any of them - and Corina Newsome, and other people that I was already familiar with. I'm like, "Y'all have just been hanging out in here?" and I'm just now am getting the invitation? What's going on?

**Alie:** That must have felt like walking into the best party ever.

**Joseph:** Yes. Absolutely, and the momentum, obviously, just has increased exponentially since that point that I came in. Initially it was just this lively place where we could just, kind of, set down all of the armor that we carry with us into the field and the other predominately white spaces and be like, "Everybody here is Black and everybody here loves animals. This is great." This is the place that I've been trying to get to all of my life.

**Alie:** I did an episode about code switching with Dr. Nicole Holliday, who's a linguist, and I imagine the code switching dealing in the scientific world must be exhausting. I feel like already so many people feel like in science they can't bring their true selves. But it must be such a relief to fully be in a group of people who have such similar experiences and you can feel like you can be completely authentic with.

**Joseph:** Yes, definitely. Code switching is a part of it. I think my favorite thing about it, that I've thought about, is hair. There's very many different types of hair. So, we have various Zoom meetings, and we're having Zoom meetings just for, like, social evenings. Before Black Birder's week we would have game nights. I have really long hair, it's like down to about the middle of my back. When I go to work at my regular day job I almost always have my hair pulled back in a ponytail, because I figured out very quickly if I don't do that, white people end up making really stupid comments and it's like, "You know what? I just have my hair down. Why are you even talking to me for having my hair down?"

That doesn't happen in Black spaces. Nobody cares that your hair is down. Everybody has some sort of type of hair that is close to what yours is. Sometimes it's messy, sometimes it's covered in a headwrap, and in those group chats, in those moments, in those Zoom meetings, it is normal and there is never a comment made. Unless we get into a topic about talking about hair care or hair care in the field. You're just like everybody else. You don't have to worry about ignorance. It's very freeing, and it makes it very comfortable, and makes it feel very safe.

**Alie:** That's one that really struck me the BlackAF livestreams, that was really beautiful to see. So often, people who are Black in STEM are tokenized, or on a panel where it feels like they have to represent everyone who has ever been in science and Black at the same time, that that kind of weight is put on them. And it was really wonderful to watch the live streams, to see that kind of burden be lifted and to see people just be able to be completely themselves and much more carefree in a space where they knew they were safe. It was really such a joy to be witness to.

**Joseph:** It's a great thing that you are able to acknowledge that, because a lot of people don't even realize how guarded and how unsafe we feel in those spaces because we are so used to, kind of, putting on faces and portraying ourselves in such a way that doesn't upset the white gaze. So, to acknowledge... to be able to see that when we are just being us and we're not just trying to put on a face for anybody, it's a whole different thing.

**Alie:** And I loved that your approach to science was so artistic and so zeroed in on the beauty of things that have been overlooked. Other people might approach their science differently.

**Aside:** In the BlackAFinSTEM episode, Joseph submitted a clip addressing BBC and National Geographic directly saying:

*I've yet to meet more than maybe two or three other people with an injury like mine who are also naturalists. This is really a good opportunity for BBC, Nat Geo, if you guys are listening, y'all don't have any representation for disabled people amongst your photographers.*

Direct, to the point, and admirable. I was like, "I like this guy."

**Alie:** How represented do you feel in wildlife photography? I feel like most working wildlife photographers are ruddy white dudes in Carhartts, you know what I mean? What does that feel like? And what *should* it be?

**Joseph:** That's multi-layered. On one hand, the comment I made when I sent in my clip, I mean, that stands. There really is no representation. I really don't think, honestly, in photography period, I can't think of anybody that I know that has a physical disability that is well-known in photography. In wildlife photography, it's even harder. Some of that is... There's a rationale to some of it because there are some places, some locations, that it is simply, highly unlikely if not impossible to get any kind of wheelchair to go. And I accept that.

What I have trouble accepting is that nobody is willing to put forth any sort of mental energy to create any sort of solutions or diversity around that. Using myself as an example, obviously somebody with mobility limitations can get pretty good at macrophotography because insects are not that hard to come by. At least for now. We can talk about the declining rate of the biomass of arthropods, which is terrifying.

**Aside:** Quick aside. I don't want to alarm you, but I looked into it, and some scientists are calling this 'The Insect Apocalypse'. It's very bad. According to a recent story in *Science Daily*, only 10-20% of insects and other invertebrate species have even been described and named, and some populations of flying insects, like those in parts of Germany, have declined 73% in the last three decades. Is it because you keep squishing them with a Kleenex and putting them in the toilet? Well, yes and no. There's a lot of factors, chiefly: habitat loss, pollution, invasive species, and climate change all contribute. You are sad right now. I understand, because I am too. I love a bug. Are you kidding? So what can we do, DadWard? Can we kiss a bug on its tiny face? It's tempting, but it's not helpful. The same *Science Daily* article had a tidy list of what you can do, which I will now read off with my mouth.

1. Avoid mowing your garden frequently. Just let nature grow and feed insects. You're welcome!
2. Plant native plants.
3. Avoid pesticides.
4. Leave old trees, stumps, and dead leaves alone. That's where bugs live.
5. Build an insect hotel, why don'tcha?



6. Reduce your carbon footprint in general.
7. Support and volunteer in conservation organizations.
8. Don't release non-native species. If your grandpa does not appreciate the emotional support iguana you got him, do not let him release it on the patio. Nobody wants that; except the iguana. And your grandpa.
9. Lastly, the article said, and I quote, "Be more aware of tiny creatures. Always look on the small side of life."

Appreciate the bugs you see. They are precious and we need them. Also, just superficially, they're very beautiful. Also, about those conservation organizations, Joseph would love to be working with them on accessibility, but:

**Joseph:** It's stuff like that that is a little more frustrating. Also, when you look at the institutional level - I've looked at possible ways to get out of my current line of work and into something that is more conservation based. And organizations like US Fish and Wildlife or the various state departments, they all require you to have a minimum of whatever the education requirement is in natural sciences. My thoughts surrounding this are that some of these institutions do have people that are on programs or push programs about accessibility or diversity. I'm like, "Okay, but where are the people that actually have to use these things?" because most of the people that I see on their accessibility programs are not people with accessibility limitations. [*clip from Slacker: "Oh, that's rich. That's really rich."*]

Why is it necessary to make sure that they have a bachelor's or master's in one of the natural sciences? They're working on your accessibility program. They don't need to know all of the other stuff, and you can teach them about all this other stuff anyway because that's what your entire organization is about. There's more that you can learn from them than anything, so open up the door and actually improve the overall infrastructure of your organization.

**Aside:** If there are accessibility positions out there, staff them with folx who know the most about accessibility issues rather than have these stringent natural science degree requirements. Joseph also told me about being part of several communities at once, something that other folx may not even consider.

**Joseph:** I had a talk with Dr. Newberry at Bucknell University a while ago. We were talking about, essentially, Black people in natural sciences and stuff like that. The biggest thing that I said to him... the important thing that I said to him was that when it comes to this momentum that BlackAFinSTEM and other organizations are creating now is to create a sense of comradery. I don't want to have to leave my Black community to have my needs met as a disabled person. I want my Black community to be able to meet those needs, because if I have to leave that Black community and I have to go to this other one, that means I have to start dealing with the anti-Blackness that exists within those communities, and I don't want that either.

It's important to me that as we go forward that we are creating spaces and opportunities for accessibility, and stuff that is not something where we're targeting disability and where that's the overall emphasis, but we are simply creating a doorway for them to come into the larger community and to go on these tracks with the rest of us.

**Alie:** Is there anything equipment-wise that could be made available to people that would help with that? Anything that exists? Anything that you wish exists?

**Joseph:** Wish exists? Yeah, well, there's stuff that does exist. I've seen various models. The one that I get the most is people will send me this chair that they've seen that is mostly... It's motorized, and it's large enough that basically you can push your manual chair into it, and it basically locks into it, and it has these, like, tank tracks.

**Aside:** P.S. I looked this up, and yes, it's like a small tank. On one hand, there's some rugged fun to be had, but on the other:

**Joseph:** And I'm like, "What would I do with that in the field other than destroy a whole bunch of habitat?" You're asking me to basically climb into a tank and kill all the stuff that I'm trying to see and photograph. This giant piece of equipment is useless to me. That seems to be the go-to; this whole motorized thing. What I want to do if I ever get the opportunity - and maybe it'll come as things with BlackAFinSTEM progress - is I would love to sit down with an engineer who does chairs, or maybe someone who doesn't do chairs but just actually has access to the resources and has enough imagination, and basically create an outdoor chair that is usable under manpower.

It's been tackled before. It wouldn't be the first time. There are a few other things, but having played sports, being a pretty high-functioning paraplegic myself - which also has to be taken into consideration. Just because it's usable by me doesn't mean it's going to be usable by someone who is a quadriplegic. That's a different hurdle, and maybe a different piece of equipment. Me, being someone who loves to be active and loves to be outdoors, I need a chair that actually can permit me the opportunity to push my boundaries, to make me tired, to potentially get myself into some bad situations outdoors, but also is capable enough to get me out of those bad situations. I have some ideas. I don't know who to kick them around to. Maybe one day they will come knocking, and I'll be like, "Let's make a chair."

**Alie:** If there's any engineers listening to this, hello! Number one, follow you on Instagram.

**Aside:** That's Instagram.com/ReelsOnWheels. Also his website ParaHerpetologica.com. It's linked in the show notes. I'm just sayin'.

**Alie:** Because your stuff's amazing. Send a message. That would be amazing if you became a pioneer of something that could get more people out into nature that was also good for nature. That would be huge.

I have so many Patreon questions. Can I go to the Patreon questions, but then I'm probably going to have a million more?

**Joseph:** Hey, I'm here for you. My schedule is clear for the evening. We can stay on as long as you want. You can ask as many questions as you want.

**Alie:** *[laughing and joking]* It's a four-part Ologies episode!

**Aside:** But before we get to your questions, Patrons, a few words from sponsors who make it possible for us to just rain cash on a worthy organization each week chosen by the Ologist. This week, Joseph, who says chronic migraines are one of the only things that can keep him from the field, told us about the American Chronic Pain Association which, since 1980, has offered peer support groups and education in pain management skills to people with pain, their family and friends, and healthcare professionals. Their website is TheACPA.org. A donation went to them, thanks to some sponsors of the show which you may hear about now.

*[Ad Break]*

Okay. To your questions. Many of you, including Hilary Larson, Matt Ceccato, Teagen Andrews, Victoria Harding, Ashley Kalkofen, Karolina, and Gaelle Gralnek all asked the same one that Cora had.

**Alie:** I'm going to ask you Patreon questions.

**Joseph:** Cool. Let's go.

**Alie:** Several hundred people have questions for you. So many people wanted to know about getting the perfect shot, and essentially, a lot of people want to know - this is Cora's first time asking a question: What do you look for in a perfect shot? Others wanted to know: What is the longest you have ever waited just to get the perfect shot of a specimen?

**Joseph:** The longest I've waited, with wildlife in general, it's really only about timing and it's kind of about luck. You've got to put yourself out there enough times to have enough opportunities to surpass the *numerous* failures that you're going to endure to get and find that one creature that is cooperative enough and sits still long enough for you to get your photo, set it up however you want to, and execute it. As far as how long I've waited, I would say not very long because normally you go into a situation and it's like, "Okay, I'm going to take a photo," and then whatever you're about to take a photo of runs away, flies away, says, "Screw you. Bye. Fail." Then you move onto the next one, so it's not really a whole lot of time spent.

It's kind of the same thing, once you get that one, it's great. They're comfortable and they chill, then you get your photos and you're on your way. Sometimes, they're semi-cooperative and these are the ones that drive me crazy: semi-cooperative in that they sit still for a second and you'll have the shot lined up but as soon as you click the shutter, they move. [*clip from The Space Children: "Why? Why?!"*] They drive me absolutely mad because they keep giving you hope because they're not moving very fast; they're not fleeing from you, but they're just not staying in that same position. You continue to readjust, and reattack it, and try to get that shot. I've probably spent, uh, [*thinking*] 30 minutes to one hour with one subject trying to do that.

**Alie:** Your depth of field is really shallow, right? So if they move literally even a millimeter it probably changes it?

**Joseph:** Yeah, if they move at all, it completely changes what area of the subject I'm shooting is sharp. Focus stacking is kind of the way around that to some degree, but even if they move while you're focus stacking... If they continuously move, then you're just SOL until they stop. It's like, "Can you please stop? Just stand there. Stay!"

**Alie:** What do you think your percentage is between shooting and editing?

**Aside:** Joseph says he doesn't do much tweaking in terms of color because he wants the natural beauty of the creature to really come through, but what about the sheer number of images he takes? Just considering that it takes me at least 14 to maybe 17 tries just to get a selfie where I don't look like my Uncle Ron, what is his ratio? How many of his photos are garbage? I need numbers!

**Alie:** Do you have 5,000 photographs to go through, or are you just really good at knowing when to pull the trigger?

**Joseph:** Practice. It's definitely all practice. I've got a lot of throwaway stuff. One of these days - maybe I'll make it my post for tomorrow - I'll post my very first photo that I ever took of

any invert and something that's current so people can really understand that "This is where you start and this, if you keep doing it, is where you can end up."

**Alie:** That's great. That'll be so encouraging for those of us who have a lot of blurry photos of bugs. *[laughs]*

**Joseph:** I had tons of them. It's funny. Since you've been campaigning to get me more followers, other people are going through the history of my stuff and they're liking those, and I'm looking at it and cringing like, "Oh, my god! I can't believe I actually shared this thinking that somebody was going to appreciate this. That is such a terrible photo." *[laughs]*

**Alie:** That's how I feel when people say, "I started listening to *Ologies* from Episode 1." I'm like "NOOOOOOOO!" I'm the same way. Everyone feels that way and it's so funny because that means you're progressing, but I totally get that we see our progress in such a different 'lens', if you will.

There's someone who follows you, Timothy Dykes, who also loves macro photography, and they asked: What macro photo did you take that blew your mind once you saw the details you otherwise couldn't see with your eyes? They say: For me, it's been the scales of moths and butterflies, or hairs on butterflies, or textures on beetles. Did you see any details of anything that you were like, "WHAAAAT?"

**Joseph:** That's a good question. I don't have an immediate answer for that one.

**Aside:** While he thinks, I have to tell you: Once, I took a photo of a daisy, and it wasn't until I zoomed in later that I saw a perfectly matching yellow globular spring tail, which is a tiny bug with a big cute butt. It looks kind of like a Pokémon character. I cannot stress how globular its spring tail is. It's perfect. This hidden world of hallucinations is just one magnification lens away.

**Joseph:** It's really not about the animal itself, I think. Maybe it's just because it's a pet peeve of mine, sometimes when I'm approaching these higher magnification images, is dust; especially with these fuzzy jumping spiders and they'll have dust all over their face and head and I'm like, "Have you just been rolling around in dirt? Well, yes, obviously, you have been rolling around in dirt, but could you have at least prepared yourself or cleaned before we did this?"

**Alie:** It's like watching someone eat potato chips and having them in their beard. You're like, "You got a little... right there."

**Joseph:** It is exactly that. It is maddening.

**Alie:** Forrest Stotts, a Patron, "Ooh ooh!!" was their response to you being on the show. Any good online classes? It's been a while since they used their camera, but they would love to get back to it.

**Joseph:** I haven't taken any classes. Well, no. That's not true. I haven't taken any online classes. I have taken two in-person classes with another macro photographer. His name is Thomas Shahan. He's also in Oklahoma, and his is the first work that I started to look at and study. First thing I did was I started reading different concepts about lighting, composition, exposure, how to use your camera to the fullest extent of its capabilities; shooting in manual instead of auto, or even the macro mode, the macro dial, that's on some cameras, not quite as efficient as shooting in manual. The other thing with me has been lighting; seeing what other people are doing when it comes to lighting, how to get that soft light. When you're shooting macro, you have to have external light. You can't get around it.

**Aside:** So, manual settings can be even better than the pre-programmed macro settings. While we're all here, why not, let's have a quick breakdown of some macro photography terms. First of all, in terms of lenses, Canon calls macro lenses "macro lenses," but Nikon calls them "micro." So, don't get thrown off by that. I don't know why. I'm not here for a Canon-Nikon feud. You can do that among yourselves.

Now when it comes to lens length, it depends on what you're shooting. Some experts say 45-65 millimeters is good for product photography; 90-105 millimeters is good for bugs, and flowers, and small objects; and 150-200 millimeters is better for being farther away from your subjects. But we're going to talk about some super cheap hacks if you don't want to invest in a bunch of lenses for this. Also, in general, the higher your f-stop, the smaller the aperture, and the more crisp the details in your photo will be.

But also, the higher the f-stop, the smaller the aperture, the less light you're letting in, so the longer the aperture has to be open. But if it's open longer, and your shutter speed is slow, that could lead to blurring if your tiny little model moves. You can get around that by having a high f-stop, which means a small aperture, and more light. Like sunlight or a flash? What are we talkin'?

**Joseph:** Some of the stuff is just, you're so close to the subject, that there's no other... the natural light is not penetrating into the lens. You're too close. So, we have to have some flash, but you have to make that flash soft so it's still appealing. I just read. Reading and looking at other people's work is, kind of, really the way that I've learned over the years. And practice. Practice constantly.

**Aside:** A bunch of patrons wanted to know how to get little critters to sit still while you're shooting them or while they're waiting in their dressing room to get shot. Micah Weir, Dawn Ewald, Mae Merrill, Ira Gray, Thomas N Wyndham, Ashley Konon, and Mariko Shinn all wanted to know, as did Charlotte Fjelkegård, who asked: Flying insects. How to photograph them so they're sharp and snazzy, not just an adorable blur or, "It was there just now, I swear," they say.

**Alie:** Do you have bugs that you, say, will kind of collect and hold in, like, a 'greenroom', until you're ready to shoot them, or do you shoot them in their setting where they would be and you're out on the prowl and you shoot as you see them?

**Joseph:** A little bit of both. It depends in some cases. If you look at my Instagram, the one that I posted, I think, yesterday, that tiger beetle. I definitely caught that guy. They *do not* sit still. [*Alie laughs*]. So, I caught him, I let him settle down for a little bit. And after that I was able to approach it a little bit differently and get my shots.

**Aside:** By the by, if you follow @ReelsOnWheels you may remember that this is a shot of a tiger beetle, and usually we see them from above, their backs are maybe greenish blue and metallic, they're kind of clambering around leaves like a drunk robot. But the way Joseph got his shots was head on, staring straight into their jaws, which honestly looks like if moose antlers had been dipped in gunmetal, just ready to gnash up whatever prey was unlucky enough to find itself crushed in them. And it gave me a whole new perspective and respect for these tiger beetles.

**Joseph:** They are also one of the ones that is absolutely masterful at driving you crazy, because you'll approach them and then they'll fly, but they don't fly very far. They will fly about six, ten feet away from you where you can still see them. And it's this whole game of cat and mouse and 'you can't catch me'. I'm just like, "Okay. All right. How am I going to work

around this one?" But I mean, anytime that I can, I like to shoot where they are as they are, with as little disruption to that as I possibly can.

The best way that I've found to do that is by finding spaces where manmade infrastructure and nature meet. Kind of like parks, park benches. There's one park here where there's this large walkway that's completely built from wood and it's covered by trees, and underneath it all of the foliage from all the winters or falls past, you know, all of that stuff is built up around there. There are invertebrates everywhere, all the time, and they're pretty desensitized to human presence. It's granted me a lot of experience and opportunities to continue to shoot.

**Alie:** Oh, that's amazing. That's such a good tip. The way that you can turn a spider into, like, a *Star Wars* character almost, do you know what I mean? [*giggles excitedly*] They look like these beautiful little aliens when you see up close, and you see how many eyes, and hairs, and their little chelicerae! It's just amazing. Your leafhopper from the other day looks like it looks like a *Star Wars* character to me. I don't know why. [*both laugh*]

**Aside:** Honestly, these helmet-y heads, and the big visor eyes. They've got these gleaming, robotic exoskeletons. It's the stuff of sci-fi franchises and action figures. Now, if Joseph's work has inspired you to get up close and personal with a slug, or face-to-face with a winged tiny, what will you need? Less than you think, perhaps. Patrons Marylynn Skruck, Fanny, Laura Darnell, Deli Dames, Patrick Shaw, Kaydee Coast, Cat Lindsay, Meghan McLean, Howard Yermish, Rachel Weiss, James Miller, Kelly King, Arianna Mattson, Tino H. A. Bratbo, and Emm all want to know, essentially, what Matthew Sparks asked, which is: Do you have any alternative kit suggestions for beginners who really want to start shooting macrophotography but can't afford a macro lens? Oh, boy howdy, does he!

**Alie:** So many people... And you do not have to divulge this, but so many people are begging to know what kind of cameras, or lenses, or anything gear-wise that you can dish on?

**Joseph:** I'm going to take one further and I'm going to add this: My personal opinion is that photographers that try to hoard all of their information of how they got to where they are, are jerks. [*clip from Umbrella Academy: "What?" "You heard me."*]

**Alie:** Okay. [*laughs*]

**Joseph:** There's no reason not to share as much information as you possibly can, because at the bottom line, there are no two brains that think exactly alike. Especially when you're dealing with wildlife, because it is not there to accommodate you like a model is. You can't instruct it on how to actually pose for you. You have to just get what they give and make the most out of that situation, and no two scenarios like that are going to be exactly alike. So, I can impart whatever knowledge I want and whatever skill that a person is willing to actually gain for themselves through practice, and our photos are still not going to be the same photos, so there's no reason not to share it.

I shoot, now... I started with a Canon t5i, which is a Rebel series, which is an introductory DSLR. I now shoot with a Canon 90D, a significant upgrade in resolution. I could print massive prints of my images of tiny things, and that was the whole reason that I got the camera. Canon also offers mirrorless. I'm not trusting mirrorless yet because Canon is new to mirrorless. So, I'm waiting to see what that period is and see how it's received by other photographers.

**Aside:** By the by, I looked it up for us, and a Rebel body you can get used for less than \$200, so that's good. And when he says mirrorless, that's as opposed to a DSLR camera. DSLR stands for digital - because, no film - single lens reflex, which means there's a mirror in the back of the camera that bounces the image through the lens up through a prism, through the viewfinder, into your eye. That means when you hit the button to take the picture, the mirror has to flip out of the way, and it lets the shutter behind it open and the sensor records the visual information. *That is what those click-click-click noises are in press conferences, that's the mirrors clicking and clicking, in a camera! Now you know!*

Now, mirrorless cameras, - instead of a mirror to put it through a prism, to put in through a viewfinder, to go in your eye - they rely on a digital preview, which could have a little bit of lag time, also there are some differences between autofocuses. But now, if nothing else, when you hear your phone making that shutters clicking noise you'll think about how weird it is that they had to record the sound of a mirror flipping up to tell you that your picture took. *[shutter clicking] [whispers] Yesssss, I look like Uncle Ron.*

**Joseph:** Venus Optics or Laowa, they manufacture lenses and they really seem to cater to macro photographers. They have a wonderful assortment of stuff, but a lot of their lenses are manual, so they don't have electronic aperture settings. So, you really have to know your gear and know how to actually manipulate it by hand rather than within the camera itself. That's essentially what I use. I think I have five or six different macro lenses. If you're just starting out, you can get a basic kit lens, and if you get a reversible ring that you can attach to your camera, you can flip that lens around, attach it to the lens, and essentially inverses the optics. So, you basically have a macro lens that will get a lot closer than, say, a regular 50 or 60-millimeter would.

**Aside:** What?! You can flip a lens around backwards and use it that way?! That's like learning you can take your shirt off and wear it as pants!

**Joseph:** That's one thing that Thomas Shahan, one of the guys that I've learned from, used to do. He is a hardcore thrift seeker. I'm a gearhead. I love new gadgets, and toys, and being into play with stuff. But if you're not in that position, just get any camera that you can get your hands on, get a reversible ring so that you can actually attach that to it, or just shop around for cheap, used macro lenses. You can usually find them at fairly affordable prices. And work on your lighting. You need diffuse light.

**Aside:** A speed light is that flash attachment that clicks on top of the camera. But point it directly at a little critter and it's kind of like taking a picture of yourself under a bay of fluorescents. You kinda wanna soften it a little bit. Just diffuse it. You want your crickets to feel handsome.

**Joseph:** Right now, I'm experimenting with a piece of foam, and basically have cut a hole out of this sheet of foam that my lens fits through. So, my flash sits on top of the camera, and when the flash bursts, it is essentially diffused through this piece of foam, so it spreads it out more and then it's softer once it actually reaches the subject. It's a really easy way. I mean, the foam is cheap, if I mess one up, I just go cut out and make another one. It's not the most environmentally friendly because foam kind of sucks. There's other ways to just do it yourself. I have a friend of mine who took, like, an old cereal box, formed it so that it actually fit over his speed light, over the flash on the camera, and then he covered the cereal box with a bunch of plastic bags. And that's his light diffuser.

**Alie:** *[laughs]* That's amazing.

**Joseph:** It's really, it's literally endless. Thomas Shahan, he takes like a plastic sheet, like 8x11 paper protectors, and then he puts a bunch of tracing paper into that, and then he takes, like, a wire hanger to actually create his outer ring of it so he can shape it however he wants to. And that's his light diffuser.

It's literally 'do what you want'. It's 'do it yourself'. If you can build stuff around the house, there's all kinds of options. But I would still stress that if you're going to do it, make sure the light is right. The light is important. Spend some time in getting the light right. [*"I'm ready for my close-up"*]

**Alie:** A lot of people wondered; Leanna Shuster, Ellen Silva, Meagan Walker, Sylvia Triverio, Ellen Durnal, Tino H. A. Bratbo, Chelsea Nichols, Rachel Sortor, and Rachel DeGouff all were wondering: Is there anything on your iPhone that you could do if you just want to, maybe, make your time in the park a little bit more macro-friendly? If you're not aspiring to say, Joseph Saunders-levels of amazingness, but you want to put something on your phone, like an Olloclip? Anything like that, that you recommend?

**Joseph:** I can't recommend anything based on experience. I don't have any attachments to my phone. I do know... A friend of mine puts on a moth night, [*Alie whispering in background "Yesssss."*] where he basically puts a bunch of lights around this area and spreads out these sheets and it collects all kinds of bugs. It's great. And I know one guy, he doesn't have a camera, he has a phone. He has an attachment to his phone and that's what he uses to go around, and he shoots moths. And he gets an excellent perspective on what they are. It is a really incredible device to be able to get a very clear photo that is up close to very small things.

Since it is attached to your phone, it's going to be really difficult to get the lighting and exposure, or have as much control over that, as someone shooting a DSLR with speed light and flash diffusion would. But if you just want to learn more about the tiny world that we exist in - because this is the bugs' planet, they're just allowing us to be a part of it - I would strongly recommend that. Honestly, to some degree, I miss it because... I still remember when I first started shooting, I was just running around taking pictures of anything, trying to get something just looked sharp, because that's where you start. You try to get something sharp, and then you work on the exposure, and then you work on the composition, and then you work on the lighting, and then you... etcetera, down the line.

**Alie:** And now you're up to some level where you can capture a jumping spider, having one slow tear running out of its eye that evokes both loneliness and regret.

**Joseph:** [*laughs*]

**Alie:** Your subjects are Meryl Streep in, like, a moment of contemplation. [*laughs*] It's amazing.

**Joseph:** But at the same time that does limit me because I spend more time on each individual one and I'm not just running around taking photos of every little thing that I see, because I limit myself based on the quality of the photo that I can get to some degree.

**Alie:** Can I just say that everyone needs to have a friend that puts on a moth party?

**Joseph:** [*laughs*]

**Alie:** If you're not on a group chat with at least one person who's like, "I've got the blacklight and the sheet. Where are we meeting?" you need new friends. [*laughs*]



**Joseph:** No kidding. As long as I've been doing this, I only met him just last year. It's fun. Actually, there's a photo that's on my Instagram of a horsefly...

**Alie:** Yes, I know that one!

**Joseph:** Yeah, so that was actually taken at the first moth night that I went to.

**Alie:** [*squeals excitedly*]

**Joseph:** The moths, they frustrate me. So, they land on the sheet, and the only photo that you're going to get of any of these moths is just a plain dorsal photograph that is really good for identification and that's kind of about it, from a photographer's perspective. So, they're going crazy over moths because he loves moths. And I'm all for it. I love his enthusiasm about it. But I'm running around in other places looking for something else that is perched up somewhere else. Actually, the leaf hopper was photographed at the last one that I went to.

**Alie:** Oh my gosh. Oh, great news! National Moth Week: July 18th through 28th!

**Joseph:** Nice.

**Aside:** By the way, for more on this see [NationalMothWeek.org](http://NationalMothWeek.org) or follow [Twitter.com/Moth\\_Week](https://twitter.com/Moth_Week). Just when you thought summer parties were cancelled, there's always you and 50 bugs.

**Alie:** That is a thing, yeah. You're able to get a lot of facial angles too. Is that a matter of you having to move your lens to them or can you kind of gently urge them with a pencil to, like, [*vaguely posh accent*] "Face here, darling"?

**Joseph:** Both. If you move yourself, that is the preferred idea. Sometimes they are *just a little* bit off and you want them to sit just so to get the angle that you want. The best way to go about doing that is not to use any part of your own body because there's something about human touch... They recognize it as something to get away from. [*clip from Jerry Maguire: "I'm not really a hugger."*] I will find the stem of a leaf, or something that is much smaller than them, and just very gently try to coax them over into a different location. I have much greater success with that.

**Alie:** Oh, smart. So they're like, "Okay, this is leaf just wants me to move."

**Joseph:** Yeah. Like, "Oh, I know what that is. That's not going to eat me. It's fine."

**Alie:** [*laughs*] Yeah. It can't feel your heartbeat through your fingertips with a hunger for moths. Okay, I loved this question - several people asked it, Kathleen Sachs, Josie Gombas, Cat Lindsay, Adrienne Hollister, and Nicole Wackerle - because they asked it verbatim the exact same question. Literally: What has been your favorite animal to photograph? And Nicole, bonus question: Any critters that give you the creeps?

**Joseph:** Hmm. Favorite animal to photograph. How specific are we going? Are we going like species specific, or...?

**Alie:** Sure. Even if you're like, "I met one. Her name was Julie. She was a mantis." I'm all in. Be as specific as you want to get.

**Joseph:** I love mantises so much.

**Alie:** I love them too! [*gasps*] Oh my God. I had a pet one named Mirabelle, and she died, and we had an open casket funeral.

**Joseph:** I have three mantises right now.

**Alie:** Ohhh my gosh! Now, are those the orchid ones that I've been seeing you photograph?

**Joseph:** There is a young... It wasn't an orchid, it was an Asian spiny mantis.

**Alie:** Ohh. Oh my gosh, beautiful.

**Joseph:** I posted one of those recently. That was when it was still very young. It's an adult now.

**Aside:** Okay. Imagine a mantid that looks like something from a Ridley Scott fever dream. Just huge, shiny eyes, and sharp angles, and spines. It's chilling, and tiny, and elegant.

**Joseph:** I have the green ghost mantis. I think there's a photo of that one up there.

**Alie:** Yes.

**Joseph:** And I have African twig mantis. I haven't posted a photo of him yet, but he's pretty cool.

**Alie:** Wait. Which is the one that looks like it is like an alien?

**Joseph:** That' the ghost.

**Alie:** Ohhh my gosh!

**Aside:** These ones look like a leaf grew a face and became a supermodel. Ohh the cheekbones! Amazing.

**Joseph:** I've had three varieties of those. I have two photos up there of my black one. She was the first one that I ever got. She has since passed away because they have a very short lifespan, unfortunately. They only live about 12 to 18 months. She was just over about 12 months. Mantids are amazing. I love to find them and see them, especially in the wild. I really wish there was a greater diversity of mantids in Oklahoma. I think when we have, like, one. No, we have two species that I'm aware of.

And then, obviously, jumping spiders, because I don't understand how anybody doesn't love jumping spiders. At this point, I kind of get an uneasiness about spiders, which sort of answers the other question. I actually started with a little more uneasiness about spiders, and then there was one night that I was in the park and there was this massive hole in a tree. And I was just like, "I just know there's going to be one night that I'm going to shine that hole in the tree and there's going to be something in it, near it, or something else that's going to freak me out." And lo and behold, one night I was leaving the park, it was behind me, but I remembered that it was there. I turned around to shine my light and there was a fishing spider.

**Aside:** Quick aside: how do you describe a fishing spider? It. Is. Not. Little. These things pluck fish out of the water and they eat them like corn on the cob.

**Alie:** Ohhh! [*freaked out*]

**Joseph:** And the leg span on this fishing spider was equal to my hand.

**Alie:** [*gasps!*]

**Joseph:** My hands aren't small. I can palm a basketball, if that gives you some sort of perspective. It was a *big* spider. And I was like, "There's no way I can *not* take a photo of this. I have to rise up to the occasion." And I had to, kind of, coach myself into this to kind of get close. I was like, "If this thing jumps off that tree and onto my face, I'm going to scream, [*Homer*

*Simpson classic scream*] but I'm going to do this anyway, even though that's maybe a possibility in my imagination," and I did. The photos are terrible because this was very early on. And I desperately want to find another one so that I can do this again because now I'm like, "Okay, now it's been like five years. I'm ready for you."

**Alie:** You're like, "Rematch!"

**Joseph:** But nothing ill came of it. I don't think she moved at all. I'm certain she was a female just because of the size. I mean, they're sexually dimorphic. Males are usually very tiny. She was a massive spider.

**Alie:** Wow. Oh my God. That's amazing.

**Joseph:** Sorry. I just got distracted. I just saw jumping spider on the wall. *[laughs]*

**Alie:** *[squeals softly]* Do you know which one? What kind it is?

**Joseph:** I'm pretty sure it's the *Maevia inclemens*.

**Alie:** Ooh, that's exciting.

**Joseph:** My partner, she keeps a dart frogs and tree frogs, so we feed a lot of feeder insects. And so I transplant jumping spiders *into* the house - because I have a partner that's awesome and lets me do that - and they keep the fruit fly count low.

**Alie:** Ah, that's smart!

**Joseph:** Yeah.

**Alie:** Do you have a dream assignment or project that you would want to work on? Would it be to, kind of, infiltrate Nat Geo's ranks and have assignments for them? Would you want to publish a book? Is there anything that you really want to do with your photography that would be a dream for you?

**Joseph:** So I would absolutely jump at the chance to work for someone like Nat Geo. Dream assignment though, my dream would be to be able to host a gallery of my images on walls. But I want to do this in the hood. I mean, I would take the opportunity if it was at some sort of prestigious location or anything like that at all. But I want Black children from my neighborhood to actually see this, and to take an interest in it, and to actually see themselves reflected in the work that I do, and consider it a possibility for their own futures. That's my dream opportunity. I want them to have access to what I do, because I know my doorway into this coming from a middle-class, military family is different than what some of my Black peers experience earlier in their lives. So more than anything, that's what I want.

**Aside:** Again, he just set up his Patreon yesterday. So if you want to see shots he doesn't show the rest of the internet go to [Patreon.com/JDMonroe](https://www.patreon.com/JDMonroe). I am begging him to do a calendar one day, but he's plotting his next move.

**Joseph:** So even through the week of Black Birders Week and probably now even, as much praise as I've been getting, and as much as I appreciate it, like many of my peers I still deal with imposter syndrome. I'm like, "Am I actually as good as some of the people that I used to look up to? Am I there yet?" The whole idea of printing, selling, and doing all these things from my photos, I'm like, "I just like to take pretty pictures of bugs. Don't burden me with all of the other logistics of being a professional and dealing with money." Just give me a really big bag of money or something and I'll just do all of this for sort of free so that I don't actually set prices and stuff.

**Aside:** Oh, my other question from earlier was, do you have any idea what bird that is singing in the background because I know people are gonna ask me.

**Joseph:** What bird? What are you talking about?

**Alie:** There was a bird earlier.

**Joseph:** In the background here with me?

**Alie:** Yeah. Yeah.

**Joseph:** That was not a bird. That was a frog.

**Alie:** That was a frog?! Ahhhh! *[laughs]* What kind of frog was it?

**Joseph:** That was either a *Dendrobates auratus*...

**Aside:** He wasn't sure exactly which frog it was because his awesome partner has five species of poison dart frog and four species of tree frog. That is nine more species of frogs than I get to live with. And yes, I wanna be friends with her too so bad.

**Alie:** That's amazing. I thought that they were birds out the window, but I love it even more now that I know that it's a frog. That's amazing, because I knew people were going to ask me. Also, I wanted to ask, do you have any advice for people that you wish you had known earlier or when you were younger? Anything that you wish you had a voice like yours?

**Joseph:** Man, that is a heavy one. Wow. One, for Black children that are raised in non-Black homes, It is perfectly within your right - it is not only within your right, but it is good for you and necessary for you - to understand that your life, and your experiences, and even your personhood is different from other people in your family. You do not have to limit yourself or push yourself to try to fit in, or to lower or lessen your Blackness to make them comfortable. Not even your family. Live in your Blackness, love your Blackness, wear it with pride, and if they cannot accept that, move around it and find people who will because your Blackness is not going to go away. This country especially will remind you of it the rest of your life, especially when you are away from them. So learn to love it, learn to live in it, learn to defend it, and learn to defend others as well.

**Aside:** This dude is awesome.

**Joseph:** As far as disability, test your boundaries. Don't be afraid to test her boundaries. And I mean, that applies to not just people with disabilities. That's anybody. If have the ability to do something, see how far you can go with it. And if you fail, if it goes too far, if you get yourself into trouble, take a serious look at it, assess it, and then create a new approach to it.

When I'm in the field, a lot of people are always worried about accessibility and stuff and my safety, and like... I fall down. I've fallen out of my chair looking for something. I get out of my chair to catch stuff sometimes. It isn't like something that is literally completely attached to me. There's a person that is not completely dependent upon this chair. I can move around. Chair just makes it a lot easier. Don't worry about my safety or my wellbeing. Be a friend if I need help. I'm going to get myself into trouble because I want to. Be the friend that is actually supportive of that process.

**Alie:** Don't be a friend who's trying to impose limits on you.

**Joseph:** Yeah.

**Alie:** That's great. Last questions I always ask; what is one thing about your photography that is the most annoying or the thing that you dislike the most? You mentioned crumbs on spider hairs.

**Joseph:** *[laughs]*

**Alie:** *[laughs]* But is there anything that frustrates you either from a micro or a macro perspective?

**Joseph:** Not really. The thing, I guess, with photography with me is that it's my escape from everything. This is what I do when things like the murder of George Floyd and everything else become too much. When I need to just kind of set that down, and take a break, and be a person that does a thing. And so I grab my camera, and I go out as much as I can into some solitary place, and I try to create something that is worth appreciating. There really isn't a whole lot about that process that I find too cumbersome.

Maybe it's just the actual act of carrying it around, I think, more than anything because with microphotography, you have your camera and if you shoot a DSLR, it's a larger camera. And you have your speed light and depending on the size of your light diffusion system, that also takes up space. It can get a little bit clunky and difficult to carry around a little bit. But that's really it. No part of the process is too much other than maybe the occasional tiger beetle that doesn't want to sit still and just likes to fly away five feet at a time just to let you know that he's faster than you and that you can't catch him if he doesn't want you to.

But I mean, even then, that still has a value because even if I don't get a photo, that's still lived experience. I still got to see it even if I don't get to share it with anybody else. I still got to observe its behavior. I get to ponder, "Why is it flying only a few feet away and insisting on staying in this area?" And the reason that it is, is because there's a smorgasbord of other smaller insects that it is preying upon at that moment. He's like, "I am not leaving this buffet. I will escape from you, but I'm going to continue to eat."

**Aside:** Also, while on the topic of flying insects, what gives him butterflies about wildlife photography? What does he love the most?

**Joseph:** I don't know if anything really gives me butterflies, but I mean just the possibility of the next image. Even when you've done something, and you're finished with it, and you can appreciate it, there's always room to get better. Or even pretend that there's this notion about photography that 'there' only so high you can go', 'you can only get so good'.

Let's just say that there was an actual cap on that. Even if there was a cap on that, with wildlife photography, even with that imaginary cap in place, there's a limited, finite number of situations that you're going to find yourself in in your entire life, even if you're doing wildlife photography every day for your entire life, that you're going to find yourself in to be able to actually create that shot. So it's the possibility of things that just keeps you going. You never know.

I come up with different ideas or thoughts of compositions when I'm just kind of sitting in that house. I'm like, "Okay, I want to take a picture of this species in this kind of an environment or this location." It's just an endless number of possibilities, and hoping that by the time I'm done and dead, that whatever it is that I create will have an impact that goes on past my life.

**Alie:** Already has. Already has, really. Just the beauty of your work inspires so many people to look at their world differently, and the passion behind the way you approach the natural world and also sociology, and the human experience, and the Black experience, and your advocacy for that; I think you have already changed so many lives.

**Joseph:** We're not done yet. BlackAFinSTEM is just getting started, and who knows what's going to come of that? I'm looking forward to it because this is something that up until recently that I kind of dreamed about. I didn't even know if it would actually be something that would come to fruition within my lifetime. So, I'm already elated at what we were able to do with Black Birders Week. I don't expect it to be the case, but even if we were unable to achieve anything else, I would be happy that that exists. I am happy that it exists. That was an experience that I will never forget, even if there was nothing else that was similar to it in the future.

**Alie:** Oh yeah, no. You guys are just getting started. Are you kidding? *[laughs]* This is like watching an empire being built. It's beautiful. It's really great. I'm here on the sidelines cheering you on. Such a huge fan. Such a very authentically huge fan of your work. It's just gorgeous. I'm such a huge fan of it. And I'm so glad that you took some time out to talk to me. This is amazing. I can't wait to put this up. It's such an honor to talk to you. Thank you for letting me be your fan. If I'm ever in Oklahoma I hope maybe we can go out herpin' or inverting.

**Joseph:** Sure. Glad to. I mean, I've got extra space here. I'm never one to not take an adventure when the opportunity shows itself.

**Alie:** *[laughs]* I'm there. Thank you so, so much for doing this.

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So ask smart, talented people earnest questions and most importantly, listen to what they have to say. And follow them on Instagram [@ReelsOnWheels](#) for some absolutely gorgeous, life-changing macro photos of some of world's most overlooked beauties. Thank you Joseph for letting us look through your lens.

Also, if you are working from home and maybe spending less money at coffee shops, consider becoming a Patron of Joseph's. If even a sliver of you tossed him a few bucks a month for all the free photos that he gives the world, you would afford him more time in the field doing what he loves most, and making me, your dad, so happy. And his brand, brand new Patreon page is linked in the show notes. It's [Patreon.com/JDMonroe](#). He set it up *today*. Y'all, I was his first patron! Shoutout to his wonderful partner Hayley for helping with that.

You can also buy his prints. You can get more info. That is all on his website at [ParaHerpetologica.com](#). There is a link right in the show notes. Definitely go visit that. He's on Twitter [@JDMonroe210](#). That will be in the show notes. And while you're there, follow [@BlackAFinSTEM](#). They're great. There's also so many more cool weeks coming up like Black Ento Week, Black Herpers Week; [@BlackInNeuro](#) is another account that's just launched and Black in Neuro Week is July 27th through August 2nd. Don't forget Moth Week is this week, so get yourself a light and a sheet. See who shows up to your bug party.

We are @Ologies on [Twitter](#) and [Instagram](#). I'm [@AlieWard](#) on [both](#). [OlogiesMerch.com](#) has your shirts, and visors, and caps, even swimsuits if you want my name on your actual butt. Who doesn't? OlogiesMerch.com is managed by Shannon Feltus and Boni Dutch. They are two very hilarious sisters who host the comedy podcast *You Are That*. Erin Talbert admins the haven of a [Facebook](#) group. Emily White and all the Ologies Transcribers make transcripts available at

[AlieWard.com/Ologies-Extras](http://AlieWard.com/Ologies-Extras). And the links to those are in the show notes. Special thanks to everyone who has ever helped with transcribing, making those episodes accessible to deaf and hard of hearing Ologites and anyone who needs great descriptions of the sound effects in writing. Thank you so much for doing that. Caleb Patton bleeps episodes to make them kid safe. Those are available at the same link.

Noel Dilworth helps with all my scheduling, Kelly Dwyer helps with website updates, Jarrett Sleeper does assistant editing and is just a top-notch human being. And thank you of course to Herper-at-heart, dino and cat enthusiast, host of the podcasts *See Jurassic Right* and *The Purrrrcast*, our lead editor Steven Ray Morris, who's just a gem of a gent. Nick Thorburn wrote and performed the theme music. And if you stick around until the very, very end, right... like I'm just about to flick the lights on at 1:59am in a bar and send folks scurrying... right before I do it I tell you a secret at the end of each episode.

This week it's that I went for a walk in my neighborhood and I found a crow roost. I've heard that there's a crow roost somewhere within a 3-mile radius of here. I see the crows flying at night and I found the crow roost y'all! There's a thicket of eucalyptus trees, and that's where the crows all sleep, and I went there, and there were crow feathers all over the ground. I got so excited because they just shed them and they fall while they sleep. Anyway, I know where the crows sleep and I just want to stand under the trees and offer them a basket full of breakfast peanuts, but I don't know what time crows get up and I feel like it's pretty early. Okay. Stay safe, wear a mask, look a bug in the face and tell it it's beautiful. Okay. Berbye.

*[Outro theme music]*

*[clip from Photograph by Nickelback: "Look at this photograph..."]*

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