

Ursinology with Chris Morgan

Ologies Podcast

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Oh hi. Hey, it's that person with your exact same name that you wanted to follow on Instagram because you thought it'd be funny but they never approved your follow request, Alie Ward, back with an episode of *Ologies* you have begged me for. You've pleaded with me, "Bears. Bears. Do bears! What's wrong with you? Do bears!" And it has been a few years in the making because bear scientists are busy people, people. And I had the wonderful Dr. Rae Wynn-Grant on deck, but the pandemic, she started doing fieldwork, and then I started meeting more and more bear biologists and I didn't know what to do because they were all great! And then this bear guy happened to be available. I jumped at the chance to chat bruins with him.

Patrons, thank you so, so much for supporting the show. You can join Patreon for as little as a dollar a month. Patrons sent in almost 500 questions for this one, which we couldn't possibly have gotten through in one episode, so... Surprise for everyone! There's going to be another with even more Ursinologists. So sit tight for that.

But before we meet this episode's ologist, a thank you also to everyone who rates and subscribes to *Ologies*. It means so much. It honestly keeps this podcast in front of so many other ears, and eyeballs, and I read every single one and then I thank someone who has recently left a review this week. Such as, Justin VK, who said:

The back catalogue of Ologies held great promise, so I started the Volcanology episode and haven't looked back. As of tonight, I've caught up on all the old episodes – leaving me both satisfied and disappointed that I'll have to wait for new episodes. Ologies shares the work of so many cool people and interesting topics, while always being fun, engaging, accessible, and progressive. Thanks Alie and all the Ologists!

Justin VK, thank you for the review. Also, if you have listened to Volcanology, Jess Phoenix has a new book that just came out called *Ms. Adventure: My Wild Explorations in Science, Lava, and Life*, and I just thought I would plug that because she's great. So if you listened to Volcanology, get her book.

Okay, buckle up for bears. Ursinology comes from *ursus*, Latin for bear. In Greek, it's *arktos*, so... that's right. *Arktos*? The Arctic has bears: Antarctica does not! I will never be the same after learning that this week. This ologist – whoo! – what a get. Not only is his voice just butter in your ears (which doesn't really make sense, but it's good), but the dude also just loves bears so much. He studied conservation management in Farmborough in the UK, got a Bachelor's in Applied Ecology, a Master's in Advanced Ecology, and has studied all kinds of forest critters, but his heart is all about *ursus*.

He co-founded the Grizzly Bear Outreach Project, which is now the Western Wildlife Outreach organization, and he is the Executive Director of Wildlife Media, which is a nonprofit production company. He's done research and education on every continent where bears exist. He's talked about bears hosting programs for PBS, BBC, Discovery, and more. He also hosts a very good, highly acclaimed, and respectable podcast called *The Wild with Chris Morgan*. We recorded this episode a month or so ago but I've been sitting on it because *The Wild's* new season debuted today.

So sit tight, and learn about how many bear species there are, what happens during hibernation, panda poops, milking a grizzly, weird teddy bear trivia, how to read a bear's behavior, camping and hiking safety tips, California grizzlies of yore, CUTE EARS (why are they so cute!), soft fur, and the

absolute majesty of winter bear butts, with bear friend and world-renowned Ursinologist, Chris Morgan.

Alie Ward: I'm so stressed out about this. I can't even tell you.

Chris Morgan: *[laughs]* Why?

Alie: This is the most stressful interview. I have never had so many questions about bears.

Chris: *[laughs]* That's really lovely to hear.

Alie: I don't know how I'm going to get to all of them. It's like those game shows where you have to go shopping in, like, under a minute. [*"The clock is ticking."*]

First thing I always have people do up top, if you could say your first and last name and also what pronouns you use.

Chris: Yes. Chris Morgan, and he/him.

Alie: Cool. Now, you are an ursinologist, correct?

Chris: Um, yes. I guess I am. Yes.

Alie: I have a feeling you do not use that word very often.

Chris: Not really, no. Though I was thinking about that before the call, and it is... Yeah, it's a strange word that you don't hear much in the world of bear biology and conservation. But it makes total sense.

Alie: And you're a bear biologist and a conservationist. Slightly more syllables than ursinologist, but you're a person who studies bears.

Chris: Yes. I've done quite a bit of studying of bears and I'm part of a community of people around the world that actually focus their lives on these creatures, so it's a pretty interesting group of folks, these ursinologists, or bear experts, or bear biologists. Some of us are outreach, and educators, and born from science, and others are the hardcore fieldwork research biologists that focus every day of their lives doing that stuff. And I've dabbled in just about all of it my whole... My whole life is about bears and appreciating them, understanding them, telling stories about them, having people relate to them in some ways. Maybe even learn about themselves in the process.

Alie: Speaking about the humans involved, what is a gathering of bear people like? What's the vibe?

Chris: *[laughs]* Good question. There can be a lot of ego in the room. These big creatures... It would be a very interesting task, actually, to interview lots of different bear biologists from various parts of the world and ask them why they got into it, and I'm sure there's as many different reasons as there are bear biologists. Some of it is just borne of the fact that these creatures are so incredibly big, impressive, and physical. There's a presence about them. Another aspect is their high intelligence. Another aspect is their conservation value; by protecting them you're protecting all kinds of other species.

So, for different people it's maybe different reasons. Some people slip into it by mistake like I did, and other people, sort of, focus their entire life from day one on these creatures because perhaps they were born into it by their parents being into it. So, it's always an interesting mix of people at these gatherings. In fact, there's an organization called the

International Association for Bear Research and Management, and it's made up... A few years ago at least, it was made up of about 600 bear biologists around the world. So it's a big community and each of them studying various aspects of their own bear species, from India, to the Arctic, and South America, to Russia.

So, we have these bear conferences and there's a lot of drinking, a lot of bear stories, and a lot of science shared, and a lot of enthusiasm. And then there's certain little cliques. You know, the sloth bear biologists stick together a bit more. There's the grizzly corner, you know? There's the black bears that are not quite up to being a grizzly bear... It's really interesting dynamics, yeah.

Alie: Speaking of that, I understand that there's not that many bear species in nature. Is there something like seven, or are there way more?

Chris: No, there's eight bear species. That's it. It's a nice little tidy package of... It's a family of animals called Ursids. So, there's only eight of them around the world, so I always feel like it makes it quite manageable, quite understandable. Way back in history, talking 100 years, when the [*British pronunciation:*] nomenclature was really taking hold...

Aside: No-MEN-clature? Is that a regime, or was it a war? It took me a minute, but I realized it's [*American pronunciation:*] nomenclature. So yes, at the start of binomial nomenclature of genus, and species and such:

Chris: It was thought that there were dozens, perhaps even hundreds of different bear species, but that's sort of condensed. They've been clumped a bit more. You know, you get your splitters and clumpers when it comes to these Latin names for different bear species.

Like for example, brown bears, some of the biggest bears, if not *the* biggest bears in the world in fact are brown bears; coastal Alaskan brown bears. Those are found in that part of the world, and the equivalent over in Kamchatka and Alaska. These big, fish-eating brown bears that get to colossal... I always think, like, dinosaur, pre-historic proportions. Some of them, the biggest, can be 1,800-1,900 pounds when they go into their dens, right? That's a brown bear. That's *Ursus arctos*. It doesn't get more "Bear" than *Ursus arctos*. *Ursus arctos* literally means "Bear bear," one in Latin and one in Greek. So, you don't get more bear than *Ursus arctos*, right?

So, these giant bears in Alaska. Same species as a brown bear in Italy, in Abruzzo's mountains, where they are *maybe* 250 pounds in weight. Almost 10 times less heavy than some of the bears in Alaska, five times at least.

Aside: So yes, those 1,900-pound chonkers up in Alaska, and then the 250-pound Italian Alps *bearinos* across the globe:

Chris: Same species, though. *Ursus arctos*, these Bear bears. Grizzlies, right? I call them euro-grizzlies. So you can see how this family of bears, even just within grizzlies, were split eons ago into, "Whoa, that's got to be a different species to the one in Alaska. Italian and Alaskan bears surely can't be the same." But they've clumped them more now into just these eight. So yeah, it's pretty interesting, the history of them.

Alie: And how did they get to where they are? How did the range expand all over the globe? I guess, other than the Antarctic?

Chris: Yeah, they're found on four continents around the world. They're not found in Australia. Everyone always says, "What about koalas?" But koalas are distinctly marsupials, as you probably know. They're not in the bear family, koala bears. So yeah, and especially when it

comes to brown bears, they are the most widespread of the eight bear species. And you know, starting life in the Asian subcontinent and working their way to the New World across the Bering Land Bridge.

Aside: If you're secretly wondering, "Where is the Bering Strait again?" Well, it's the slim, 55-mile ocean corridor where Alaska *almost* touches Russia, like two outstretch fingers on the Sistine Chapel ceiling. Except during the Ice Age, the sea levels were 300 feet lower so there wasn't so much as a land bridge but, like, a land promenade over which bears, and humans, and all manner of clever beasts could just saunter over.

And: frickin' camels! Camels that evolved in North America and peaced the fuck out and headed to the other direction! This historical region is called Beringia, which, if you ask me, sounds a little too much like "bazinga."

Chris: They became incredibly successful, incredibly diverse in their habits, and incredibly... adaptable is the word. It makes them my favorite species, the grizzly bear, the one that I've looked into, and worked with, and been around most. And I just think it's partly that these creatures are... [*in awed reflection*] Ah, they look at every day of their life with calculated risk, and reward, and memory, and figuring out what they need to accomplish that day, and that week, and that month, and that season in front of them. They're so highly intelligent. They've become incredibly adaptable and successful as a bear species. So, they're the most widespread, the brown grizzly bears. Brown and grizzly are the same species.

Alie: Okay, that was my next question, because I was like, "Wait a second. You've called them grizzlies and brown." So, a brown bear is a grizzly, but a black bear is not a grizzly, is that right?

Chris: Right, exactly, yes. So, we would call a grizzly a brown bear in Italy, right? So, they're all under the umbrella of being a brown bear. Some of them are called grizzlies, and those are in North America. Those interior grizzly bears that we hear about, the famous Yellowstone bears, those are grizzlies. Interior Alaska, those are grizzlies.

Interestingly, though, even in North America, you start getting to the coast and people start referring to them as brown bears. But the umbrella is brown bear and then some brown bears are referred to as grizzlies, even though I joke about these little Italian bears being the euro-grizzly. [*laughs*]

Alie: It's kind of like Americans have huge trucks, and then there are smart cars in Europe, you know? It's like a Fiat. [*shrug*] Still a car.

Chris: Exactly. "Everything is bigger over here in the States." Yeah. [*laughs*]

Aside: So yes, grizzlies, and brown bears, and Kodiak bears, they're all the same genus and species but there are subspecies within them, including California's grizzly bear, which numbered over 10,000 before the discovery of gold nuggets in Northern California in the mid-1800s. And by 1924, every California grizzly bear had been hunted and killed. And a California grizzly, with golden brown fur and that signature brown bear shoulder hump, still adorns our state flag as a reminder of how we came here and killed stuff. That's not true, but it kind of is.

But just a reminder on a flag with no grizzlies? Can we fix that? In 2014, the US Fish and Wildlife Service was on the receiving end of a plan to reintroduce grizzly bears to California, and they were like, "No, that's okay. We have black bears. We're fine." So, *bear* in mind that the brown bear isn't the only species of bear, of course.

Chris: There are seven other species, and they can... Sometimes I don't talk about them enough because I get so obsessed with grizzlies, with the brown bears. But there's seven other species found in really interesting places as well. So, the species are... Let's start in the north; the polar bear's up there. Grizzly bear, brown bear that we've talked about. The American black bear; spectacled bears in South America, they have these spectacle marks that look like eyeglasses, so they're called spectacled bears in South America, down in the Andes.

The Asiatic black bear, different to the North American black bear, those are found over in Asia. The sloth bear, and that's a long, shaggy-coated bear that specializes in eating termites in places like India; interesting creatures. And lastly, the eighth species, and the smallest, interestingly enough, is the sun bear. The sun bears are found in Borneo and other places in Southeast Asia. I've seen them in Borneo and worked with some incredible people who are focused on sun bears there, and they're really tropical.

The coolest thing about this range of these bears and where they're found is really the fact that they can be found... I mean, think about it. Polar bear, in the highest reaches of our planet, in the most hostile environment in the Arctic. It's thriving... The best part of a polar bear's year is the middle of the winter. Can you imagine that? Pitch dark up there, absolutely treacherously freezing conditions, and that's when they're at their best and that's when they're up and at it. That's when the hunting is best. So you've got the polar bears up there.

That's the same time as a bear in Borneo in the tropics of Asia is scaling trees to eat figs. And these are the tiniest of bears, the smallest bear species. A big male might be a couple of hundred pounds or 150 pounds. But they're really important because they help to manage and help this jungle, this rainforest home in Borneo, thrive by spreading seeds, tilling the earth, by representing, most importantly, that ecosystem, that rainforest.

And we can talk more about that because they're incredibly powerful as umbrella species. Just being able to look at a bear like a sun bear in Borneo and say, "Hey, if we protect that population of sun bears in Borneo, we protect everything it needs." So you're automatically, by default, protecting that forest. And bears are awesome at that, right? Every one of these species has a story to tell and a place to protect.

Aside: PS, what is an umbrella species? So that is a species that needs a pretty big habitat. It might migrate or need a pretty wide territory, and preserving their habitat provides protection for a ton of other species. This is not to be confused with a keystone species, which really defines an ecosystem and really holds it together by being there. And without a keystone species, things would start to be thrown really off balance.

Now, an indicator species is one whose presence is a good sign that things are going okay. Human beings? Probably not an indicator species, tbh. But now let's move on to a hardball question; I think one that's on probably all of our minds.

Alie: And as a bear biologist, do you get to hug any bears?

Chris: [*sigh of adoration*] Augh! One of the best days of my life was doing just that. I've not done bear research, per se, myself in dens. I've not done denning bear research, but we joined a biologist back east for... I was working on a series for PBS about animal homes. I'm like, "Great. We gotta do animal homes." It was everything from bird nests, to beaver lodges, and lots of different species over the course of about three different episodes. And I'm like, "We've got to do bears!" They're like, "Pretty obvious choice, Chris, right? You're the bear guy." I'm a bit biased, right?

But I wanted this experience to get into a den with some bears. So, we went out to Maryland and literally crawled in with the biologist into this den. The bear was tranquilized, the female was tranquilized, and I got to pull out these four little cubs that were just born a matter of weeks beforehand, and... Oh, it was just absolutely heart-melting. As we were processing the female and radio-collaring her, and taking a blood sample, and just checking up on her health... The cubs of course are used to being... need to be with the female to keep warm. It was snowing, freezing cold outside, middle of winter.

And so it was my job to hold these black bear cubs in my jacket while we processed the female. Aw! Just purple eyes looking at me and just like, "Hi. Are you... are you my new mom?" It was the sweetest, sweetest thing. It'll stick with me forever. So yeah, crawling into those sorts of dens and having that kind of experience, it's amazing thinking about what those bears are going through and how they accomplish that.

Hibernation in bears is such an interesting thing. Can you imagine being a creature that big? We're about as big as a black bear, right?

Aside: How big is a black bear? So, smaller than a brown bear, with females around 150 pounds and males topping out usually around 250. About the size of an English Mastiff, which is a very large dog. But there are outliers who have topped 800 pounds, which is huge for a black bear. And one gentle giant black bear named Duffy weighed 690 pounds and then lost over 400 pounds in a winter, just snoozing himself scrawny.

Chris: So, you can imagine, October comes around and just going, "It's kind of cold. A little bit difficult to find food. I think I might just sleep for six months." *[laughs]* You know? It's incredible, isn't it?

Alie: I *can* imagine. I can imagine very well. *[laughs]* Too well, in fact.

Chris: *[laughs]* Can you? A nice, long, six-month nap.

Alie: Yep. "See ya!" I have a question about getting into it. The world would be overrun with ursinologists if there was a promise that one day, even for 15 minutes, you got to snuggle a baby bear.

Chris: I think you're right.

Alie: But what, kind of, got you toward this path? Was there a specific species or an experience that you had that really, kind of, lit that fire in you?

Chris: Yeah, definitely. Sometimes it's an evolution, isn't it, and an interest grows. And oftentimes it's like an intersection and you go left, or right, or you bump into something or someone. For me, it was definitely that. I'm from England originally; I've lived in the States for 23 years. But before emigrating to the States, years before that I was... I'm 52 now, so I was 18 years old. I wanted to come to the States and experience the wilderness of the place. I always say that I think I was born with a very strong nature gene, I like to call it.

And I think everyone's born with a nature gene to some extent, but I think society sort of whittles it out of us and chips around at the edges of a nature gene to the point where people and young kids think, "I can't make a living out of it," or, "I can't survive by just having a nature gene," and perhaps they're teased at school. We're often loners, we're often introverts. We're often people who just want to be out in the woods turning over rocks and stones and looking for insects and stuff, right?

So, I had all that about me, and depth of, sort of, love for wildlife but I'd always dreamt of going to the States. So when I was 18 I came and worked on a summer camp in New Hampshire, like a wildlife conservation summer camp. It was amazing, all these young kids, all there to learn about wildlife, and wildlife management, and even hunting and other things; bush skills, bush craft, and backcountry survival, things like that. I loved it. So I came over as a summer camp counselor from England.

We'd have these guests come through once in a while to talk to the kids about wildlife. One week it was a moose biologist and this woman came in to talk about her moose research. And then there was a coyote biologist, and these were all interesting but didn't, for some reason, grab me like the next guy did, because he came in talking about black bears.

And I just literally remember my jaw dropping at everything he was saying. Fascinated by him... The fact that this guy was studying bears and making a living, and he knew everything that you did about these creatures, something in the moment of meeting him and hearing about his work talking to these kids that just really grabbed me. So I ended up asking him for about three weeks if I could join him in the field. I wanted to go and experience what he was doing. He was catching the local bears and radio-collaring them.

After about three weeks, I think he was just sick of being annoyed by me, so he came to the summer camp and picked me up. And one night, it was... It was weird. It was like nine or ten o'clock at night. It was dark, it was about... August, it must've been. I jumped in his truck and we drove out of the summer camp. And you know, it's a left turn to the forest where you presume all the bears are and a right turn to town. And he turned right! I'm like, "Where are we going? I thought we were going into the field."

And he said, "Yeah, we are. These are my study animals down here." We got into town and he pulled up at the garbage dump. At this garbage dump there were 14 black bears sitting on this giant pile of garbage! [*heavenly angels singing*] Moonlight shining down on them. You didn't even need a flashlight. It was the most... Aside from the most hellacious stink, it's like, "This is the most beautiful thing I've ever seen in my life." So I'm like, "I want to do what this guy's doing!" And we hadn't even done anything yet. Just seeing these bears, I was like... I just couldn't believe someone could do that with their life.

It represented adventure, excitement, wildness, intrigue about these curious, smart animals. This smart guy that I'd met, I'm like, "Wow, this guy is probably one of the more intelligent people I've ever met as an 18-year-old kid." And he's focused on this one animal, and that's where his knowledge begins and ends. It was amazing to me for lots of different reasons. So after that, I came home to England after a summer of life experiences like that and...

Well, back to the garbage dump, we ended up tranquilizing bears in this garbage dump. He would take potshots with a tranquilizer rifle, they'd go to sleep, and he's like, "Okay, go chase that bear," because the dart had a tranquilizer *and* a transmitter in it. So he would shoot the rear end of this bear with a tranquilizer dart, it would disappear into the brush, and I'd have to go off charging after it and make sure we found where the bear was before it disappeared out of range.

I just remember standing in the middle of this garbage dump and I couldn't find this bear. It was my first one that I'd ever chased. [*laughs*] And suddenly it went really quiet, and I didn't know where it had gone. It was pitch dark. I had a headlamp on. And then suddenly, among the garbage, just a few feet away from me I could just hear this [*snoring*]. It was one of the bears he tranquilized. He was right there asleep. The whole thing blew me away.

I came back from England and slowly started to figure out where bears were. Do I have to go to New Hampshire for this? Where are they? I had no idea. And then came to find out they were in Spain, there were two or three euro-grizzlies, brown bears, in France. There were 50 or 60 in Italy. So there were some, kind of, on my doorstep near England and I made it my life's work to get to know them. That's where the journey in the bear world began.

Alie: Did you ever keep in touch with that bear biologist?

Chris: You know, I didn't. I think about it all the time. I didn't, and I'm dying to. Wouldn't it be amazing to just pick up the phone and try to find... I tried to find him about, what, ten years ago because I wanted to thank him for the path that he'd set me on. That level of influence in your life is powerful. I think about it and him all the time, actually. But I've never tracked him down. But I will.

Aside: Okay, I did a little digging, and it seems that the bear guy in New Hampshire is Dr. Andy Timmins, and I discovered this by googling 'bears+dumsters+New Hampshire'. Also, I found out that on April 15th he's leading a seminar about the state of New Hampshire bears and human-wildlife interactions, i.e., bears and garbage! Now, the best news is that it's over Zoom, and I'm going to post the link on my website in case you'd like to join from your own quarantine den in hibernation pajamas... still.

Alie: Can you explain to me a little bit about what a bear's yearly, kind of, cycle is like? Because hibernation completely blows my mind, but I also don't know... I hear bear biologists referred to as carnivore ecologists sometimes, but I don't even know if bears *are* carnivores, or if they're apex predators. How are they eating and sleeping? [*"You ask a lot of questions."*]

Chris: Yeah, so they are carnivores, but a lot of them are not very carnivorous, if you see what I mean. So, they're officially in the carnivore group of animals, but a lot of their diet is vegetation. So, grizzlies for example, in some parts of the world a grizzly bear eats 90% vegetation and only 10% meat. And then if you get to places like coastal Alaska... I spent a lot of time literally sitting among grizzly bears there watching them feed on salmon, the salmon in that part of the world becomes a huge part of their diet, and so there's the carnivore coming out of them.

Some grizzlies will eat elk. Some eat deer that have been killed by avalanches. They're not, essentially, really good at chasing down big fast prey like elk and deer, but they're happy to clean them up when they find them. So, that's where the carnivore comes in. They're kind of opportunistic carnivores, meaning that if there's a meaty meal around, "Oh my god, of course I'm going to take it," because their metabolism benefits from it. So in the case of a grizzly or a black bear, you know, they basically spend their entire life just thinking of two things. One is food, and one is sex.

Aside: Chris says: perhaps that's why bears are so relatable. Just snackin', lovin', cuddling, plus all-you-can-eat salmon sushi, and boning, seasonal depression naps, and eating literal garbage. Who's never been there, right?

Chris: Constantly, sort of, just driven by their stomachs and constantly trying to find maximum number of calories for the minimum amount of effort. And they do that in a very intense way because they've only got six or eight months to do it in, during the spring, summer, and early fall when they're out of hibernation. They're basically preparing themselves every year to go into hibernation. So they need enough fat to see them through a winter, which is when they recycle their fat into urea, and they don't defecate, they don't urinate. They basically... They recycle all of their bodily fluids and fat in order to stay and survive in the

winter den, avoiding the lean times of food. So, you can see why summer and fall are so important to them, like, "I've got to get fat. Got to get through the winter."

And in the case of a female bear, it's really important for them to be in shape by the time they go into the den because that's when the cubs appear. So the cubs that we were checking out in Maryland in the den, that was in February, just before they were about to emerge. March, April, they emerge from the den. But they had just been born in, like, January, in that winter den with the female. Incredible story in itself. You know, a female bear basically just pops out a little bear cub; it's the size, or smaller, and the same weight as a squirrel.

Alie: Ah! So little!

Chris: Yeah. It's blind, it's helpless. It finds the warmth of its mother's teat and latches on and drinks some of the richest milk in the animal kingdom and grows like a weed.

Aside: Sidenote: How do they know that? I just read a study about obtaining bear milk, and it's done by tranquilizing the bear, and giving it an oxytocin injection, and then "manual expression." There's also a company, GrizzlyMilk.com, that claims to sell hand-harvested Montana grizzly milk. And from what I can tell, it's not a real company.

But speaking of debunkable flimflammy, when mamma is giving birth, she is not passed out cold and surprised to see kids that look like her when she wakes up in the spring. It's not like draw-on-your-face-with-Sharpies, when-did-I-have-this-baby kind of sleep.

Chris: And then they pop out of their dens in March or April like, "Wow, okay. Into the outside world." So the whole cycle is based on, you know, eating, finding a mate, and for the females, giving birth to the cubs and making sure that they're in a fit enough state through each of those seasons to survive, and thrive, and do those things, and to procreate. For a bear it's all about calculated decisions, about where the food is at any time of year; whether it's up in the high mountains or down in the valley bottoms, or a range of both, right?

A lot of them will start feeding in the valley bottoms in spring and they eat a lot of plants. They start gorging on, like, obscure plants like horsetail. Horsetail being the Equisetum plant, one of the oldest plants in the world. It's one of their favorite things in spring.

Alie: Really? It's so woody!

Chris: It is when it gets old, but in the spring when it's really fresh and delicate, they go for it.

Aside: Horsetails, sidenote, are those plants that look like a bunch of tiny bamboo. And bears also love to munch sedges, which are tufted, grassy-looking marsh plants. It's kind of like bellying up to an all-you-can-eat salad bar for them.

Chris: And the same with sedges. You watch grizzly bears in the sedge meadows of Alaska, I've done this a lot, and they literally look like... sometimes you'll see what looks like a herd of bears, 20 strong in a meadow, and they're all just grazing these sedges because they're packed full of protein. And that's what they want when they come out of their dens.

And then as the plants start to evolve, and grow, and emerge further up the mountain slopes, then the bears will follow them on this, kind of, elevational migration, which is such a cool thought. And then they come back down as things start to emerge down in the valley bottoms again; in the case of Alaska, the salmon come in in July and even more at the end of August, and the bears know it. So you can sit there in just amazing places...

I took a small group of people to Alaska a few years ago. I do a lot of expedition guiding, so there's a small group, four or five people, and I said to them, "I want to show you these bears and the way they behave during the salmon season." So I went up to this river and I said, "We're all going to sit here." It was about six or seven feet away from the riverbank. The water is right there, no fish around, no bears around. So everybody's saying, "Great. Okay, yeah. This looks okay, but why don't we sit on the riverbank, our feet dangling over the edge of the riverbank?" I'm like, "No. You'll see why."

And so we sat six feet from the edge of the riverbank, and suddenly the tide changes. The water starts to come in, and you can imagine this [*sound of fast-running stream*] beautiful, clear water coming up through the willows, mountains snowcapped all around. It's the most mind-blowing, primal setting. The tide changes and the sea starts to bring in fish. And these fish, sockeye in this case, and silver salmon, are coming into the shallow water to spawn upriver.

As they do, *sshka-sshka-sshk*, you can hear them scuttling through the water. [*stream sounds continue with fish splashing*] And the bears hear them too. So the bears start coming out of the forest. These people I'm with are like, "Oh my god. There's the fish." And then they're like, "Oh my god. There's the bears!" Literally, immediately the bears start to come out because they know the tide has changed and the fish are coming in. Before you know it, this giant female and her three cubs walk by us right on the riverbank. [*laughs*] Five feet away from us.

And she stashes her cubs, which are just cubs of that year, so the smallest, cutest variety. Stashes them right there next to us while she goes fishing. So there she is, tuned into these fish. She's seen enough – not many, but enough – humans to know that we're not a threat. And in fact, to know that we can actually defend and protect her cubs from males – which are sometimes going to come in and be aggressive towards the cubs – because the males are more nervous of people.

So, this bear's been around. She's processed all this year after year. She knows where the salmon are, she knows what to listen to when they're coming up the river. She knows she stashes her cubs on the bank next to some homo sapiens and they'll probably be okay while she fishes because she's trying to replenish her fat stores that she's lost over the winter. There's, like, a thousand things going on at once. Sorry, I get a bit hyperactive talking about this stuff.

Alie: No, I love it!

Chris: It's just... It's the coolest sensation and you feel like you're, sort of, stepping back in time in a place like this, into the annual lives, into the seasons, and their thought processes. And it really... [*deep sigh*] It recalibrates you, you know?

Another point, this bear comes by and stands on the riverbank... and the people I'm with are freaking out by this point, a little bit quietly because I've told them to sit quietly and everything's going to be okay. And I'm watching and monitoring the behavior of all of these bears, and we're surrounded by six, seven, eight of them now. One of them stands at the riverbank in front of us, literally stands up, grabs its fish that it's got between its paws...

Aside: He's talking about a bear, not a person.

Chris: ... grabs its fish and stands up on its rear legs. Now at this point, it's looking over us, and a couple of the people are like, "Oh my god! Is he going to attack?" I'm like, "No, bears don't attack when they're standing up. He's just looking at a bear behind us." And this place in

Alaska is, like, they're literally looking through you as humans. They're not interested in you; they don't perceive you as a threat. You're kind of a neutral entity and it's the other bears that they're interested in and curious about.

So, it's this big, sort of, game of chess going on in this place where they all know the limits of each other, and the dangers, and how to avoid them, and how to avoid physical confrontation, and we're just a tiny part of that chess game where they actually use us to their advantage in some cases. It's the most wonderful, connecting thing. You're not thinking about email and texts while you're in that situation. *[laughs]*

Alie: Yeah. *[laughs]* I've never seen one in the wild, but I think a lot of us, when we hear about bears in the wild we think, "Do I freeze? Do I yell? Do I make myself bigger? Do I run away?" I realized... I wrote a list of questions that I had for you and then I have a bunch from listeners as well. One of the questions I wrote down, which I didn't even realize I typed it until right now, is just, "Have any bears eaten you?" What kind of question is that?! *[laughs]*

Chris: *[laughs]* "Have you ever been killed by a bear?"

Alie: "Have you ever been devoured and mauled by a bear to death?" *[laughs]*

Chris: You know, a lot of people have asked me if I've ever been attacked, and I guess it begs the question, doesn't it? But no, never. I've been charged, I've been treed.

Aside: Did I look up the word 'treed'? Indeed, because I pictured Chris being forced to scramble up a tree and hide just out of reach as a bear tried to swipe its claws at his butt. But bears can very easily climb trees, so that's not a good escape. And it turns out that to be treed means to be cornered and forced to face one's attackers. This can happen with or without an exasperated tuba sound. *[exasperated tuba]*

Chris: I've been very close to aggressive bears, not intentionally. I don't have some death wish. I'm always very respectful and want to keep my distance and take lots of precautions. The thing about bears being as smart as they are, there's lots you can do to avoid getting into trouble with them. They appreciate it more than you do, almost, because they don't want confrontations. They're born into this bear society of avoiding those types of confrontations with each other. Think about it. If you've got an 800-pound grizzly bear or a brown bear that is aggressive, and cantankerous, it can do a lot of damage, a creature that big. So, bears have learnt this sort of body language around avoiding conflict.

It's really interesting, and sometimes I think about it when I'm watching humans, sitting on a bus, or a train, or walking down the street. We're all just basic mammals underneath this exterior, right? I think we've become a bit full of ourselves because really we're just these basic creatures. Some of the same body language, like looking out of the corner of your eye, or pretending not to look at somebody when you are, or maybe walking sideways, or lowering your head when you're in front of somebody because you don't want... I'm tall, I'm 6'4" so I'm constantly lowering my head and trying to not look too overwhelming to people that are less tall than I am. There's all kinds of things that we're doing all the time and the bears are doing it too, and they've figured out how to avoid conflict in that way.

So, it's easy to stay out of trouble with them. In the case of grizzlies, keep making lots of noise as you're walking down trails. They hate surprises. Some situations you can't avoid. There's one situation I remember, I was on the coast of Alaska and it was breeding season.

Aside: Oh heeey...

Chris: So it was about June, and around the corner comes this big, brown female. Beautiful, prime of life, but she's running and looking over her shoulder. I'm like, "Uh-oh. Something's behind her." And you always wonder what it is that's coming towards you. It's clearly a bigger bear that she's afraid of. So sure enough, around the bend comes this boyfriend wannabe, this big male, three times her size. The sexual dimorphism is huge in these bear species. He chases her around the bend, she sees us there and she's a little bit startled. Part startled; part relieved. She runs behind us and sits down about 15 feet behind us.

Aside: Can you imagine a 500-pound bear tries to use *you* as a cockblock from an even bigger, very horny bear?

Chris: And again, she's using us as cover from this big, marauding male that wants to mate with her, and she's not ready for it. She might not be in estrous yet, or partially in estrous but not receptive to him yet. And he's following her until she does start to ovulate; he's going to be ready. So he sees her behind us, and us in between, and you know, he's like, "Whh... what are you doing? This is *my* target. This is the female that I want, that I'm pursuing. What are you doing there?" I could just tell he was getting anxious and started to jaw pop, which is this kind of [*popping sound with mouth smacking*], it's a sign of anxiety. And the next stage of anxiety in a bear is salivating, and he was salivating profusely. And then boom, like a bullet out of a gun, just charges right at us.

And stops just a few feet away from us. That's called a bluff charge, right? But it's a stupid name for it because it's not a bluff. It's as real as it gets, that charge. It's a bluff attack, really, is what it is. So he didn't attack, but he's charging to give us a very clear message. And you know, I talk him down, "It's okay. It's okay, Bear. It's okay. We mean no harm." Just talking calmly to him, and to yourself, to calm the situation down. And he backed up a little bit and realized he had the upper hand and just walked around us, by which time she looks at us and goes, "Okay, here we go again!" And she starts running again and off they go.

So, every situation's different. Every bear's different. But it is quite easy, if you know a few rules of their game, to stay safe in bear country.

Alie: And is it a myth... I picture, if you're camping, just any time in the middle of the night a bear will come into your tent looking for, like, a Cliff bar. Does that happen?

Chris: [*laughs*] It does. Yes. It's not a myth. In fact, they'll come into your tent looking for a piece of candy, or toothpaste, or-

Alie: [*series of adorable li'l doggie sneezes in the background*] Oh my gosh, I'm so sorry. My dog is sneezing. [*laughs*]

Chris: Is that a dog sneeze? I love it!

Alie: It's my dog sneezing. [*to Gremmie*] Oh, gesundheit, babe! What's...?

Chris: I think she's allergic to bears.

Alie: I know! Something's in her snooter! [*to Gremmie*] Whatchya got up there?

Chris: [*laughs*]

Alie: She looks... She's like a small poodle- Shih Tzu mutt, and she looks kind of like a gray bear cub, and she's the cutest thing ever. But she's just been napping and she just woke up to...

Chris: Oh, that is sweet. You know, dogs have a real interesting reaction to bears. They can get you into trouble, to start with, because they run off down a trail in front of you and sometimes bring a bear back by chasing it.

Alie: Oh no!

Chris: The other thing I've noticed... I'm surrounded by bear skulls in my house, you know, skulls from various bears that have died, and if I take... We don't have a dog but we have lots of friends who have them. If a friend with a dog comes over I'll take one of those skulls and just open up its mouth just a couple of inches and its big canine teeth show. Every dog I've ever seen, no matter how big or small, they just completely recoil. They're, like, primally afraid of that skull and what it represents. It's very interesting. Maybe your dog was hearing the bear stories and reacted. *[laughs]*

Alie: Yeah, I love it!

Aside: So yes, pardon that sneezy distraction. Also, I googled 'dogs+bears' and I must relay that in 2018, a family just outside of Kunming, China adopted a Tibetan Mastiff puppy while on vacation, and it was *[cutesy baby voice]* so hungry, the li'l puppy ate two buckets of noodles and bunch of fruit in a sitting, pretty much every day. And after two years this Tibetan Mastiff was 250 pounds. But when it started walking on its hind legs? The family was like, "Oh, maybe this is a bear?" And then the critter was... yes, a bear. An Asiatic black bear, and it's now living at the Yunnan Wildlife Rescue Center.

Also, if you see a bear in the wild acting more like a Tibetan Mastiff and just approaching people for snuggles, as some have been spotted doing in California in recent years, definitely do not snuggle it. Rather, call wildlife personnel because no, sadly, you are not just cosmically soul-bonded with a friendly bear. There have been a rash of encephalitis cases and some sort of unidentified neurological disease that these poor, friendly California bears have developed. They're still figuring it out.

Anyway, back to camping and bears' sense of smell, which is *in-tents* (intense).

Alie: There might be, like, some tasty Tom's of Maine in your cosmetics bags and it'll be like *[friendly bear voice]* "Mmm. Dinner.?"

Chris: Yes. They're definitely attracted to any unusual smell. Even the smell of plastics or petroleum-based products; a lip salve in your pocket. So whenever you're camping, you definitely make sure you don't have anything stinky or even slightly scented in your tent. It is a risk, and they occasionally do some sniffing around.

Now, the idea of a bear attacking you to get to that food and injuring you or killing you, that's a very, very rare thing.

Aside: Okay, but *how* rare? Like, a thousand people a year in the US? What are we talking?

Chris: A few years ago the stats were, North America-wide, there's one or two deaths per year in North America for both species, black and grizzly bear combined and 10-15 serious injuries. That was a few years ago, and I'd be surprised if it's changed, those statistics. So, not much at all considering there's close to a million black bears in North America. There's probably 35,000 brown-grizzly bears in North America, most of those in Alaska. And you know, look at the number of people, and the number of people that are spending time in bear country, camping and recreating. It's growing all the time.

I don't know, I think part of it, with these creatures, it's fascinating and amazing to me that they don't do more damage when they are so capable of it. Same with mountain lions, cougars. Same with a lot of these species, wolves. They are equipped to do damage to humans and they select and decide not to. Part of that is natural selection; those that are

surviving and still walking the landscape are perhaps the shyer individuals because over many generations they become that way. They've had to.

But yeah, they would choose to stay out of trouble more than they would to get into it. But every bear's different. If you sat in a room with 20 bears and you sat in a room with 20 humans, those 20 bears would be as different in personalities as the 20 humans would be. They're that smart. They're that different. They're that individualistic.

Alie: When was the last time you cried about a bear?

Chris: This morning.

Alie: Was it really?!

Chris: No. *[laughs]* Um... That's a really nice question. I don't know, I'm an easy crier. *[thinking]* I cried pretty recently about our North Cascades bears. Probably four or five months ago. These guys here are... The North Cascades are the mountains here in Washington State, where I live, and there's maybe three or four grizzly bears left. That's it. You know, they've been here for thousands of years; they have a right to be here, they have a past, and just about a present here, but their future is totally in question. They need help or they'll blip out into oblivion, and they may have already blipped out into extinction here in the North Cascades. We don't know. There's a few on the Canadian side of the border, there's a few on our side, and they need help.

To me, if we can't help a creature like a grizzly bear in these 10,000-square miles of wilderness, in a place like this, that's that wild, and that inaccessible, and mountainous, that we don't need for farming, we don't need for recreation... If we can't share a place like that, I think as much as the bears themselves... That's what gets to me. Like, I do think if we can coexist with grizzlies we can coexist with anything, right? Perhaps even with each other.

Alie: *[a little verklempt]* Aw. That's a beautiful sentiment. What do you think a person can do that might be able to help? It's so good to know that there are people who study this that care so much, you know?

Chris: There are a lot of people that do. And that's what gives me hope. Part of my work is trying to relay these stories to others, though, because a lot of scientists don't do it very much. Thank god for people like you that are getting science out there to huge audiences. We need more of it, don't we? Otherwise, science can sit on shelves and collect dust in PhD dissertations, and scientists aren't always the people that want to be out there on the front-line getting attention and raising issues. They're often happier in the field or in a lab. It's so important, isn't it? I think people finding out, even who their local biologists are, and what they're studying, and why, and in the case of bears, there's bear organizations.

We've got a little nonprofit organization called Wildlife Media. We made a bear film a few years ago that followed my journey around the world to Borneo to the sun bears, to Alaska's brown bears, to Peru's spectacled bears, and to the polar bears of northern Canada. So, four locations, and I did it on the back of my motorcycle. I like to ride a motorbike...

[clip from Wildlife Media film, Chris Morgan narrating:]

"I've been preparing for my bike trip for the last five years. But in many ways, my journey started long ago."

And this film followed me around to these different locations, and we found these amazing bear heroes in each of these places, for each of these bear species. Then the proceeds from

the film and donations from donors that had made the film possible, we gave it all to the people that were doing the work on the ground, that were in the film. So, it felt really good so we created a little nonprofit called Wildlife Media that was designed to do that and still is doing that. It's creating stories and supporting science and scientists. And especially young people, encouraging those people with the nature gene that they feel might be whittled away to keep it, and go for it, and make it part of their lives.

We're at that stage, aren't we? Everyone's got a role, and it's frustrating when you hear, "Oh, it's up to the next generation. They'll save us." No. It's up to whichever generation you're in. Each of us has to do it, whether you are 100 or whether you're 8 years old. It doesn't matter. Each of us can play a role to solve some of the planet's problems, and whatever that means... If you've got money, donate money. If you've got time, volunteer and donate your time. If you've got intellect and smarts, then offer that. If you're an accountant, do some accounting for a bear biologist, right?

Everyone can weigh in protecting big, beautiful animals. And nature ultimately ends up protecting us all. I'm obsessed with bears, but I do it as much for people as I do for bears because by protecting these big ecosystems, these 10,000-square mile chunks of the world that bears need to thrive and exist, we're protecting clean water, fresh air, natural resources, the trees that breathe out the oxygen that we breathe in. Really basic, fundamental stuff.

I always think, even climate change... I'm on this jag at the moment to really, sort of, try and help position... The natural world's biodiversity can save us from climate change. By protecting these vast areas, we're protecting forests. Something like 25% of the warming effect by human beings is because of deforestation. So imagine protecting a forest in Italy or Alaska for bear population. Suddenly, you're protecting the forest that we all need, and you're reducing carbon and all the rest of it.

Alie: Can I ask you a few questions from listeners?

Chris: Yes.

Alie: Oh my gaaawwwsh. You... Okay. Literally, I put up a call for questions. 478 questions, overnight, came in.

Chris: WOW!

Aside: But before your questions, let's give some moneys to some bears. So, the bonus episode is coming out with all of the other wonderful bear biologists. That'll be out this week. We're giving to several causes for that, but for this episode it's going to WildlifeMedia.org, which was established to create the movie *BEARTREK* with Chris. It's a nonprofit dedicated to telling inspiring and impactful stories about wildlife and conservation and supports emerging and established individuals in the field, including scientists, and filmmakers, and conservationists. You can check out WildlifeMedia.org's documentary *BEARTREK* and *Ocean Souls* about cetaceans, and Chris's podcast *The Wild with Chris Morgan*.

Chris also told me that, according to his back-of-the-envelope math, protecting the eight bear species of the world would be protecting one-third of the Earth's land surface. And he says his dream is to protect a million square miles of bear habitat in an international bear park for each of the eight bear species. So, it's exciting to support that kind of vision, made possible by the following sponsors.

[Ad Break]

Okay, this first question was on the minds of many patrons, including Laurent Duverglas, Katie Bauer, MatSciE Mo, Bailey Griffin, Adam Weaver, first-time question-asker Taylor, Emily Roth, Felix, Vesper Holly, first-time question-asker Daniel Belland, Ned Lansing, Ashley Herbel, as well as...

Alie: Jazmine Monreal and Raney Day both asked: Why bears so cute if so mean? I just want to squoosh. If bears are so dangerous, why are they so cute? Why are they both?!

Chris: [laughs heartily] I think I followed that. Yeah. [laughs] "I just want to squoosh." That's great. We've kind of run that gambit in the conversation already, from these little cubs that you just want to put in your jacket to a bear you don't want to have in your tent or on a trail.

Okay, it's a great question because I think it answers why bears are so prevalent in the human mindset, you know? We're always... Society, culture, through art, stories, fables, mythology, the naming of stars, bears have always been there since the days of us sitting around a fire in a cave. Maybe it's because of that, because they're – my god! – irresistibly cute, you want to take them home, to "Oh my god it could rip my head off if I don't do the right thing." So, there's nothing boring about them, either end of that spectrum.

Alie: That's a very good point. Elizabeth Edwards, Mo Casey, and a bunch of listeners...

Aside: Shayla Zink, Miranda Hulsey-Vincent, Alex Bauman, Annie C, Miranda Panda, Grace Robisheaux, and Bee Wilson, who asked: Pandas. What's up with pandas?

Alie: ... all of them want to know, in Elizabeth's words: Why are pandas? Shouldn't evolution have eliminated them by now? And Mo Casey wants to know: Can you explain pandas? They seem too ridiculous and chaotic to be in the same family as grizzlies. So what's going on with pandas?

Chris: [laughs] I love the way these are phrased. "They seem too chaotic..." what was it?

Alie: Too ridiculous and chaotic. [laughs]

Chris: To be in the same family as grizzly. I'd actually kind of agree with that. Do they really belong in a lineup of eight next to a grizzly? Pandas are a bit of a... They're a bit unusual. At one point, pandas weren't in the bear family and then they were welcomed into the bear family of eight, so they are firmly there now. And I'm glad they are because, you know, they're found in just a few mountain ranges in China, and they need help, and China's been pretty good at protecting them, and getting the word out, and raising them in captivity.

And wow, there's a competition; between a grizzly bear cub and a giant panda cub. I think the giant panda cubs are the most incredibly sweet creatures on Earth. But they are a bit of a social outlier in the bear family. [laughs] Sittin' around eating nothing but bamboo and quite happy with it, yeah.

Aside: Just a sidenote about pandas. How many are there? There are fewer than 2,000 giant pandas left in the wild, but they're listed now as 'vulnerable' instead of 'endangered'. So that's good.

And these carnivores do occasionally scoop up a rodent or a bird to eat, but yes, 99% of their diet is bamboo, and an adult panda – I looked this up – can eat up to 30 pounds of food a day, and it's digestible because of a microbe that lives in its pretty short poop shoot, for a plant-eater.

Speaking of which, next time you need some first date LOL trivia, feel free to mention that pandas shit up to 40 times a day, and that their faces are so cute and round because they have wood-gnashing jaw muscles. Also, their white and black fur helps them hide in the snow and in shadows.

Why are their ears something we want to softly bite on? According to science, bears have little wee round earflaps because the smaller the ears, the less heat they'll lose from them! So you know the fennec fox? Huge-ass ears, lives in the Sahara Desert. Those big sailboat ears help dissipate heat. So bears have the opposite, but both types of ears are so cute it makes me personally nauseated. I want to touch them *so bad*, but I won't. I promise.

Chris: You know, I don't know about you, but I look at a creature like that sometimes and go, "How is that even possible?" And also, "How is that possible on this one planet?" That we are here, as homo sapiens, sharing this space in time and in place with a creature like that. Whether it's, honestly, a giant panda or an earthworm, it's puzzling and it's just magical. It's wondrous, isn't it, that we do, that we're sharing it in this period of time on this planet's history with this variety of species. I think that's what gets to me. It's like, they deserve to exist. They deserve a place on this planet. They deserve to thrive. It's not all about us. My god.

Aside: Not about us. But when we do crash on a bear's couch – aka, go camping – patrons such as first-time question-asker Sannie Lee and Anna Luna who I accidentally just called Luna, had a question about if that's always such a bloody good idea.

Alie: We had a lot of folks, including someone named Luna, and Jeffrey Bradshaw, Derrick Allen, Tyler Duggan, and Annie C who phrased it this way: My asshole uncle, who likes to tell horrifying man-versus-nature stories, claims he saw a woman get dragged out of her tent by a bear in Yellowstone because it could smell her menstruation. My uncle is a complete and utter dick, but I've wondered if this was a thing ever since he told my sister.

And Luna asked about their "moon" and camping. So, is that flimflam or is that real?

Chris: In terms of the menstruating women attraction by bears? It's not true in one degree. The risk is that the pads and towels used by menstruating women smell of blood and that if not discarded safely can attract wild animals. But it's not a bear saying, "That woman is menstruating," therefore becomes a target, or "I'm attracted." No.

Alie: So attacks don't happen just from, like, a shark smelling blood in the water. Does that...?

Chris: No. Exactly. But if towels and byproducts of that menstruation are not dealt with, just like other attractants of any sort, food, garbage, anything, then it can bring bears in. If there is ever a correlation, it's that.

Alie: Okay. Good to know.

Aside: Also, ever helpful, the Yellowstone National Park website has a whole page dedicated to refuting this flimflam, giving statistics on bear attacks (which are very rare) and how an even slimmer percentage of the people attacked were doing so during their lunar bloodletting. So, people who bleed: You'll be okay, probably. But treat your used goods like food and keep it ten feet above ground, or in a lock box, or a car. And pack out what you pack in. Don't bury it. And if your uncle is an asshole, tell him he's wrong, and also that the mask goes *over the nose*, dude! I just have a feeling he's one of those guys.

Anyway, let's change the subject.

Alie: This is a very softball question in every sense of the word. Kristen needs to know which bear is the softest.

Chris: Ah, the softest fur? The softest, as in, to touch?

Alie: Mm-hmm.

Chris: Hmm... Well, I haven't touched every species, I've got to say. I've still got some left to fondle. I'd say the underfur of a grizzly is really a delicious place to be. They have these, like, three layers. The one against their skin is almost felty and thick, and the next one is warm and fuzzy. I've got piles of it that I found discarded in Alaska. I've got piles of it on various shelves around the house, and I just love touching that stuff. And then the outside is this guard hair that, sort of, sheds the snow and the rain, and keeps the sun out, and keeps them warm and cool when they need to be. So, a bear's coat is a pretty special thing, but yeah, grizzly bear underfur is a pretty nice, soft texture; that's for sure. And the cubs! Oh my god. Even more so, right?

Alie: Augh! Can't even imagine. Do you know much about the legend of Teddy Roosevelt making the teddy bear?

Chris: You know, not a lot, but I do know that he had an opportunity to kill a bear in a hunt and – whether it's the legendary part of the story or truth – but he raised his rifle to the bear and decided not to; gave this bear a chance. And that's where the name teddy bear came from, in respect of his choice not to kill that bear, which is kind of nice, isn't it?

Alie: I did not know that.

Aside: Fact check, and yep, Russian-born, Brooklyn candy shop owner Morris Mitchom and his wife Rose heard this story, Rose made a stuffed bear, and the rest is history. They ended up opening one of the largest toy companies in America. So there you have it, teddy bear question-askers, including Thomas N Wyndham, Natasha Bharj, Evie Scotia, Meghan A, Eloísa Fróes, Earl of Greymalkin, Nicole Kleinman, Katie Timothy, Nicky, and first-time question-askers Mina Craig, Daud Hellali, and Morgan Bechtle.

So that's answered, but who invented the Teddy Ruxpin, no one but me asked? I had to look it up, and the creator of the late 1980s talking, singing toy bear was invented by a guy named Ken Forsse, whose previous work involved co-founding Chuck E. Cheese and engineering Disney's animatronic Country Bear Jamboree, *and* designing the Haunted Mansion. Which, knowing all of that, Teddy Ruxpin makes so much more sense.

Speaking of kids' stuff:

Alie: The wonder Greg Walloch, a listener, asks: Does a cub become a bear in their 30s or 40s? When are they grownups?

Chris: Awesome question. So, a really old bear in the wild will be 25. I think the oldest bear that's known in research right now in the wild, certainly in the lower 48 states, is Bear 399, she's called. Her name is Bear 399, and she's in Grand Teton National Park, the Greater Yellowstone Ecosystem. So, she's basically a Yellowstone bear, and she's 24. So, she's really old. Bears don't get to be that old usually because we've either shot them, or hit them with cars, or they die from fights, or even lightning strikes and natural causes, drownings as cubs, things like that. So, she's a really old adult bear.

A cub, you know, unfortunately... the first year or two of life, half of the cubs die just because of all these threats to them. It's a tough life, being a cub. By the time they're three or

four years old, as a grizzly bear, that's when they're like, "Okay mum, I'm outta here." They hit the teenage years and they're like, "Time to head out on my own," and they become independent in that three or four years old. They might not get a chance... They can mate, physiologically, but they might not get a chance to behaviorally until they get a bit older, bigger, meaner, decide to fight other dominant males or even the females. Competition between females for male attention is not uncommon where there's dense populations of bears.

So yeah, three or four is, kind of, when they're in those young teenage years. And then an established, healthy, dominant bear is usually 10, 11, 12 years old. Then by the time they're in their mid-20s, like 399, they've usually... especially the males from fighting, canines broken off, teeth worn down, they don't look like a healthy, happy bear anymore. It's a slow demise at that point. They can live longer in captivity when they're well taken care of.

Alie: Oh, I didn't know that.

Aside: Sidenote. There are many instances of bears reaching 40 in captivity, though if you google 'oldest bears', you will mostly find obituaries. I accidentally learned about a 34-year-old male grizzly in Yellowstone who was put down a few months ago after he was munching on calves a lot. His name was 168, and he only had three little nubbins of rotten teeth left, but he was able to hunt baby cows by just gumming them to death, which is kind of cute and ferocious. It's also impressive and makes me sad.

Anyway, RIP 168.

Alie: Kayla Luft says: I saw a TikTok recently, joking about how everyone thinks that hibernation was literally just sleep for several months, and everyone's like, "Wait. It's not?" So during hibernation, are there, like, intermissions where they get up? Is it like twilight sleep? Are they out?

Chris: Yeah, they're pretty much out when they're out, but bears can also rouse themselves from that winter sleep more than a truly deep hibernating creature like a ground squirrel. They can come out to fend off danger, or some of them come out to even, maybe, grab something to eat on a warm day. But it really is a form of hibernation, and hibernation is really a spectrum from the very deep sleep... Kind of like humans. Some of us sleep very deeply and others quite lightly, and bears are on the lighter scale of that.

But you know, their breath goes down to around one or two per minute, and their heart rate drops down to about five or six per minute. They really sort of enter this incredibly efficient physiological state of being where they can sleep for that length of time, reprocess everything that they need, and still survive. Not urinate, not defecate, and just be ready to pop out once the spring emergence of plants that they're waiting for comes out in the spring again. I mean, you couldn't make this stuff up, could you? It's crazy. Even just describing it I'm like, "God, that's amazing!" *[laughs]*

Alie: Yeah! This dovetails well with a question Arthur Apodaca asked. They wrote in: Bear with me and my ridiculous question, but do bears make their own butt plugs for winter hibernation? And Riikka Puttonen said, "Oh lord, imagine if someone else did it for them." But is there some sort of "nature's butt plug" happening?

Chris: There is a nature's butt plug and it's even got a name. It's called a tappen. It's not like... The bear isn't sitting in his den going, "All right, got to forge this tappen out of a clump of dry grass and shove it where the sun don't shine." It's not that. They're out eating certain vegetation that, when they go into the den, actually becomes plugs. The theory is so that

they're not defecating in the den, and it helps that process. So yes, there is such a thing as a bear butt plug.

Alie: Wonderful to know!!

Chris: *[laughs]*

Aside: If you were to, say, look at the ingredients list on the back of a tappen, you might see the words: bark, shed epithelial cells, undigested plant material, the bear's own hair, and some dried-up foot calluses. According to Bears.org, they have a page that wants you to know that this winter ass cork is just the natural desiccation of stuff parked in the colon for a while. And when bears groom themselves? Yeah, they eat their own hair and calluses, a little bit on accident; maybe a little bit not. So what? You would too!

Also, the tappen doesn't just prevent midwinter pooping. It also keeps ants out. And yes, when spring springs, and the blossoms start to bud, and they awaken, they do their thing in the woods and they eject the tappen. But, in order to pull off a "David Blaine sitting in a room underground without eating or pooping for half the year" stunt, they have to prep. And patrons Erik K, Hope, Mairi Beacon, and Jess Swann had questions about the battle of the badonks.

Alie: Kelly Phillips said: Do you follow the National Parks Service's Fat Bear Week every year?

Chris: Totally. Yes. In fact, I know those bears quite well because they're in a national park... Thank god for these national parks, and this is a really special one, Katmai National Park in Alaska. I've guided a lot there, and observed the bears there, and practically lived among them for film projects over the years. It's a really special place, and those are the bears that are feeding on the salmon I was talking about earlier on, that get to these giant proportions. Because when you think about it, sometimes they're losing a third or even up to half of their body weight in the winter den, and they regain that, most of that in the summer.

Most of that regaining is in the midsummer to late fall before denning. They get into this mode of excessive eating. It really puts them into this overdrive of feeding. And the bears there, during Fat Bear Week, are just gorging on sockeye salmon. It's amazing. You can watch them eat 10 or 20 of these fish in the course of an hour, and each of these fish is five, six, seven pounds. They get to the point where they're eating so many of those fish that they'll just choose... They'll get very selective. They'll just choose the most beneficial parts.

They'll pull off the brain. They'll bite the brain off and they'll strip the skin off these big, beautiful salmon that we'd pay \$30 or \$40 for in a store. And the filet will just float off down the river. They're not interested in the meat. They just want the brain full of protein and fat. And the skin the same, because they're full up but they're like, "I still need more. Still need more. I'm in overdrive."

It's called... Oh my goodness, my brain has just slipped. Hyperphagia. Excessive eating. They go into that mode and that's what those bears in Fat Week are right in the middle of. They look like something out of a Disney cartoon where they can hardly waddle around. Fat, happy bears; thank goodness they have places like that.

Alie: And Alex Brown, first-time question-asker, wants to know: Is that kind of a blubber that they put on?

Chris: Yeah, we wouldn't call it blubber, but it's just a fat layer. On some of them, you know, the rump fat layer on a bear can be six, seven, eight, nine, ten inches long on some of the big ones. It's what they're born to do is put that fat layer on every year.

Alie: Ah!

Aside: Last October's winner: An Alaska beautiful beast known as Number 747. And the bear's bios are all hosted at Explore.org. I have to tell you, scrolling through their Before, spring, skinny pictures and their autumn Afters, where they're plump and ready for winter, some topping a thousand pounds, it's truly body positivity and a reminder that all animals are indeed extraordinary machines to be celebrated.

Now, what if you encounter one of these bears, though? Will it be hungry for you?

Alie: Rachel Moore and a few other people wanted to know if there are any useful rhymes or sayings to remember which bear you're supposed to cower in fear at, which you're supposed to yell at? Just to give people peace of mind.

Chris: That's a great question. I'm glad it was asked because, you know, the difference between various... We've already established that bears are all individuals, right? They're all completely different characters and personalities, like humans. There's even been scientific studies done. In the scientific literature you can find words that describe certain bear personalities, like playful, or joyous, or angry, or discontented, or irritable, or aggressive and violent; all the things you might describe a human by, right? So, every encounter with any one of those bears is very different when you're thinking about your safety in bear country.

So, you might encounter a normally playful bear that is particularly aggressive that day because it's protecting an animal carcass that it's killed that's essential food for it or its cubs. Or it might be a mother protecting its cubs. Or you might have surprised that bear and they don't like surprises. So, there's lots of factors stacked on each other about how dangerous a situation can be with a bear.

But for the most part, you want to make lots of noise to avoid them, let them know that you're coming to avoid the surprises. Don't go anywhere near bears where they're sitting on carcasses. If you smell stinky, nasty, rotten meat when you're out in the forest, don't head that direction. If you find yourself in the middle of berry patches in the mountains in the fall, blueberries and huckleberries, know that a bear might be there just feet away from you doing exactly the same thing. So, just being aware of your surroundings and circumstances. Know what bear scat looks like.

Aside: Picture, if you will, an upturned tin of brownies, studded with pomegranate seeds. But a pile bigger than both of your hands. Just gaze into it, asking it questions of the forest.

Chris: It's one of my deep fascinations, everything you can learn from bear scat. And look for claw marks on trees. Look for fur on trees where a bear will stand up against the trunk of a tree, rubs its back and leave hair behind. All these indicators. And then if worst comes to worst, the question about a rhyme or how you remember, there's really two categories of bears attacking humans. One is generally a category of self-defense, being defensive, "You're in my space. I want you out of my space." That's when you'll get a bluff charge like the bear that charged at me.

Then you'll also have bears that could be predatory, and they're very different. That is a bear that is looking at you as a meal, as a source of food yourself. So, you can see immediately those two categories need two different responses. The bear that you've surprised wants you out of its space. Do not surprise it and get the hell out of its space, right? Quietly, calmly, don't look at the bear in the face. Back away. Be incredibly humble and respectful, and just make sure that that bear knows it's allowed to come by.

I've been in countless situations. You're just coming off a trail, and the bear will either walk by you or it'll disappear at a high speed in the other direction once it knows it's got a handle on the situation. In that situation: backing away.

Aside: Okay, so a *brrr* may run at you to scare you away, or...

Chris: A predatory situation's different. And strangely, this is statistically more common with big, wild, dominant black bears in the backcountry that don't encounter humans much. Those attacks can be incredibly scary. So, in that sort of case you need to be more dominant and you need to make sure the bear knows you're not going to make an easy meal. You've not surprised it, you're not in its personal space, it's following you, it's expressing interest. So, it used to be that people would separate them, "If it's a grizzly bear or a brown bear you do this, and if it's a black bear you do this."

The rhyme that she might be thinking about, and it's not really correct, is, "If it's brown, fall down. If it's black, fight back." Because a black bear fights in a predaceous way more commonly than a grizzly and a grizzly is going to potentially attack you to defend its space, in which case you'd fall down and play dead. But the rhyme, [*repeated as if over a PA: "If it's brown, fall down. If it's black, fight back."*] there's overlap. So we don't use that rhyme anymore, and I'll get into trouble for actually saying it. [*laughs*]

So, that's a really long answer. The short answer is, there isn't a great rhyme but it used to be that one. "Brown fall down, black fight back." But really, you're better off looking, "Is this a sudden defensive encounter, or is this a predaceous encounter, or something in between?" And just, you know, knowing where the bears are, knowing their behavior, knowing what they're inclined to do, it's really easy to work around their world (touchwood) and give them the benefit of the doubt and let them give *you* the benefit of the doubt.

Aside: Also, I read that if you're buying bear pepper spray, always spring for the larger can, and don't wait until a bear is directly in front of you. Bears can cover eight to ten feet in one stride. So if you spray it while the bear is 30-60 feet away, the cloud has time to take effect and disrupt the charge at you, so how you use it is important.

Now, for a few more bear tips, keep your ears open for that very special bonus episode this week, because when I get 470 bear questions, sometimes you gotta call for backup.

Alie: Okay, two quick lighting round... How many bear tattoos do you have?

Chris: Oh, I don't have any tattoos. I think about it a lot.

Alie: Really? Okay, it was either going to be zero or a thousand.

Chris: [*laughs*]

Alie: And how often do people just refer to you, not with a name, but just as "The Bear Guy"?

Chris: All the time. Yeah, even my children. [*laughs*] Some of my friends' kids actually call me not just the Bear Guy but my full name like, "Where's Chris Morgan the Bear Guy?" The full title. It's bizarre. They're hilarious, little kids.

Alie: You need that on your business card.

Chris: Yeah.

Alie: What about movies or cartoons that really do not get bears right? A lot of people want to know what kind of bear Winnie the Pooh is...

Aside: Looking at y'all, Ann-Marie Daniels, Kevin Riggi, Lisa Burnell, Nicole Kleinman, first-time question-asker Hey Art3mis!, and Zachary Peterson.

Alie: ... if Winnie the Pooh is actually a girl bear.

Chris: Oh, good question. I don't know, but I would imagine Winnie the Pooh's a brown bear. What's the marmalade all about though... I can't remember.

Alie: The honey? They eat honey in real life, right?

Chris: Yeah.

[clip of Winnie the Pooh singing: "Everything is honneeeey. I can't get enough; of lots and lots of pots and pots; of sticky licky stuff."]

Was Winnie the Pooh marmalade, or was the Paddington?

Alie: I think Paddington was marmalade.

Chris: Winnie the Pooh was honey and Paddington... That's right.

[clip from Paddington movie: "What's cooking?" "Marmalade, Mr. Brown. Go on, have a taste."]

Alie: Do they dig honey that much?

Chris: They do love honey, absolutely. They would love marmalade if they could get their paws on it. But honey is definitely high on their list. And sun bears in the tropics eat lots of honey. I've seen black bears climb in trees for honey. Grizzlies love it as well. Yes, absolutely. Packed full of calories for them.

Alie: I imagine the bee stings don't get to them that much.

Chris: No. They're pretty well equipped with that fur, and they're just hardcore. I have a bear in my local forest here that I track, and I have one remote camera out there. I just have this one camera experiment, and the woods are just out the back door here so I can check my camera and see what's on it. One day, there was a bear on it last year. Just before hibernation, before fall. And I thought I'd go out and see if I could find this one bear. I was excited because there aren't many right here.

Sure enough, I found him right in the forest just a couple of days after finding him on this hidden, remote wildlife camera. I tracked him, and he was a young black bear, and eating hornets from a hornet's nest.

Aside: Hornets don't make honey. He was eating *the hornets*. Fistfuls of hornets for breakfast! I mean, the bragging rights!

Chris: So, they'll dig into the roots of old, rotten trees and pull out hornet nests, and larvae, and grubs. You can see them swatting them away from their nose, but it's just like a mosquito bite to us kind of thing, and it's definitely worth their while. They eat a lot of insects.

Alie: Ah! And was it one of those famed, overblown murder hornets in Washington that you're talking about?

Chris: *[laughs]* No. What would they make of those?

Alie: I know! *[laughs]* A stiff price for a meal.

The last questions I always ask. This one was... I usually ask it but it was phrased so well by Sarah Bowen: Not a question, but I do hope you ask him what is the most unbearable part of their job. But usually I ask what sucks the most about being an ursinologist. What's... Either

something petty, or something trivial, or something huge. But what is the hardest part about what you do?

Chris: Paperwork, probably. *[laughs]* It's like, you don't get into it for that. You could say weather, or insect bites, but I love all that stuff. The worse it is out, the more pressure that nature puts on you and puts you through, the happier... I love bushwhacking, for example. Bears do a love of bushwhacking. I love bushwhacking! I like getting right off the trail through sticker bushes and thick scrub. Whatever it takes, I love that stuff. None of that's miserable to me. It's just the stuff back at home in front of a laptop.

Alie: If only there were worms and grubs under our laptop. We'd be more likely to pick them up.

Chris: *[laughs]*

Alie: What about the best thing about bears? Just your favorite thing about them?

Chris: I think it's their intelligence, actually. They're strong, they're mighty, they're powerful, but I think their intelligence. It's off the charts and it's surprising to most people. You've got your primates, you've got your whales and dolphins, your cetaceans. A lot of people put bears next. Very high up in terms of animal intelligence. And I think it makes them special spiritually and special as a species to learn about because they're full of surprises, because they're smart, you know?

Alie: I didn't realize how intelligent they were, and how social, and able to read cues and really assess a situation, almost, emotionally.

Chris: Yes, definitely. And capable of memory and applying things that they've learned over space and time. They can learn where a salmon run is, in a particular run, at what particular time of year, and they can traverse hundreds of miles between that time and the next year when they're going to be back, and they'll know to be there in time. It's amazing. Same with a garbage can, unfortunately. So, they get into trouble in places where there are humans... that human-wildlife dimension, which is where a lot of my work is in trying to have people understand wildlife, especially bears, in that human-wildlife space, that gray area between where our world ends and their world begins, because I think that's the front line of conservation.

So, bears learn very quickly to get benefits from that space, whether it's getting into garbage or occasionally killing young livestock, things like that. It's right on the edge of people's tolerance and it's right on the edge of where the bears are able to be. It's fertile ground there, and they're smart figuring it out all the time, which makes them the... They always seem like they're a step ahead, you know?

Alie: Well, I know people can learn more about you, and other ursinologists, and bears through your films and through your podcast. Any particular film that you think people should go to first?

Chris: I would love people to go and watch *BEARTREK*. It's really interesting. It was a film that we did a few years ago, it came out in 2018. It was that journey I took around to four different places to meet three different bear biologists, each saving their species. From the most mind-blowing, rock-climbing bears in Peru, spectacle bears that my friend Robyn Appleton studies there, to the sun bears in tropical Borneo and my friend Siew Te Wong studies them, to polar bears in the Canadian Arctic with Dr. Nick Lunn.

Each of these bear species has a different story to tell, and the story starts with me in Alaska among the big bears that I've been talking about. Then I embark on this journey to go and

find others who are crazy about bears, other ursinologists like myself, to try and understand what makes them tick and what their bears need.

Aside: So that's the movie *BEARTREK*, and it's streaming on Amazon in case you want to see all kinds of bears with Chris, and also how to camp on a motorcycle. Okay!

Chris: It was really popular and it resulted in lots of good things for the biologists. People can stream that on Amazon. So, easy to access. I'd love it if people would check out *The Wild with Chris Morgan*. That's a podcast that I do about wildlife. Lots of bear stories in there as well from different parts of the world. Lots of other species as well.

We're just doing one on jaguars right now. I was in Belize recently doing some field stuff on jaguars and scarlet macaws. I'm really attracted to these bright, interesting creatures that represent so much. So that's kind of what the podcast is about.

Alie: Amazing! I have a feeling there's going to be a lot of people tagging along with whatever your next adventures are. Consider ourselves plus ones to, like, the front-row seat to all this beautiful stuff. This has been so, so great. I'm so glad I got a chance to talk to you!

Chris: This has been fun. I've really enjoyed it. I hope I didn't talk a mile a minute too much. Don't ask me about bears, whatever you do. *[laughs]*

Alie: Are you kidding! This is like... My ears are open. *[laughs]*

Chris: Great.

So ask intelligent organisms doofy questions, and then just sit back and bask in the bear biology. Once again, that was Chris Morgan, who hosts the excellent podcast [The Wildlife with Chris Morgan](#). New episodes this season are out, literally today, so go find that. And the film he talked about is *BEARTREK*, available streaming. You can follow Chris Morgan on Instagram [@ChrisMorganWildlife](#), and [@MorganWildlife](#) on Twitter. There will be links to all that plus the charity in the show notes.

We are @Ologies on [Twitter](#) and [Instagram](#), and I'm [@AlieWard](#) on [both](#). Links are in the show notes to that. There's an [Ologies Podcast Facebook group](#), moderated by my good friend Erin Talbert. There's merch available at [OlogiesMerch.com](#). That is managed by Shannon Feltus and Boni Dutch. And thank you Noel Dilworth for helping schedule all of the interviews and for leaving an Easter basket on my doorstep and making me want to cry, in a good way.

Thank you, Emily White, for transcribing episodes. If you ever need something professionally transcribed, find Emily White. She has a new website called The Wordary. She is excellent. Transcripts and bleeped episodes are available at [AlieWard.com/Ologies-Extras](#), for free to anyone who needs them. Thank you, Caleb Patton, for bleeping the episodes. Thank you to full-time hunk and editor Jarrett "Jar-Bear" Sleeper, as well as the sunniest sun bear, Steven Ray Morris, who hosts the podcast *See Jurassic Right* and *The Purrrcast*. They both edit the show. Nick Thorburn wrote the theme song.

And if you stick around to the end of the episode, I divulge a secret nugget of truth, and I'll tell you, this week, number one: the plastic is still in the neighbor's tree. It's so high. I don't know what to do.

And number two, I was talking to my friend David about this, and if anyone feels like they've hit a wall where they're just really tired and the world seems like maybe it's about to open up but you're also like, "I also kind of want to hibernate for a while, even though that's supposedly kind of what we've BEEN doing for a year," don't worry. I think that you're totally normal. I think that we're all going through that a little bit. So if you feel really tired and you're like *[sigh]*, I think that's normal.

Okay, that's not a very good secret, but it's earnest.

All right, berbye.

Transcribed by Emily White at TheWordary.com

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