

Dasyurology with Em Dale

Ologies Podcast

August 25, 2020

Oh heeey, it's a coin from your birth year that you keep in your nightstand for sentimental reasons and because you feel oddly emotionally attached to it, Alie Ward, your internet dad, back with another episode of the podcast audio program *Ologies*, in which we explore a new ology every episode. Hop into my faded Nissan and let me take you to an island to talk about rotting meat breath and big butts.

But first, some thanks to everyone who is a Patron and gives \$1 a month or more to submit questions and see behind the scenes photos and livestreams. That's all on [Patreon.com/Ologies](https://patreon.com/Ologies). Also thanks to everyone out there subscribing, rating, and of course submitting reviews for the show which keeps it, currently, at #3 in the science charts. This little stupid show – can you believe it?? I read all your reviews and pick a just-birthered one to read each week, such as for example one by DontFeelLikeDancing who says:

This podcast reminds me to take a moment to appreciate something. I've struggled with anxiety and depression for a few years and sometimes it gets the better of me, but every week I get to hear about something new and hear someone who is so passionate about their work, even if it is obscure.

Also, everyone else, I read your reviews. Thank you so much for them.

Okay, dasyurology! The ologist themselves will get to the etymology of this ology. Be forewarned, it pleasantly involves backsides. And the entire reason this episode exists is because I was just be-boppin' around [Twitter.com](https://twitter.com), and I happened upon this person's bio and saw an ology I had never seen before. I reached out immediately, and it was on.

They got their Bachelor of Science in Ecology at Griffith University, has been a park ranger in Tasmania, and is currently getting their DPhil at Oxford University, which apparently is the same as a PhD but Oxford likes to spice it up a bit. They've been a longtime lover of carnivores, they have a particular affection for the dasyurids like quolls, which you're like, "I don't know what that is" – that's okay, we go into it. A dasyurid is also the endangered Tasmanian devil.

Incidentally, this person also has the best laugh in the universe. They hopped on the horn as I clumsily fumbled my mic getting set up, and we dove into a shimmering sea of facts about their Tasmanian roots, marsupial nipples, beers you shouldn't drink, cookies you *should* drink, the most Australian way to have an afternoon, what Tasmanian devils smell like from both ends, *Looney Tunes*, flimflammy, the disease threatening Tasmanian devils, why they're called devils, what you can do to help them, and how Indigenous knowledge is critical to Australian ecology. All this and more with quoll talker and Tasmanian devil angel, dasyurologist Em Dale.

Alie Ward: HERLOH?

Em Dale: Hi Alie. How are you? Can you hear me okay?

Alie: I can. It's so good to hear your voice.

Em: It's so good to hear your voice! This is crazy! *[laughs]*

Alie: I know! I'm like so beyond thrilled. I cannot believe that there's an ologist who studies these animals. What time is it where you are? You're on the East coast? No, you're in Oxford?

Em: No, I'm in Australia. It's 8 am. *[laughs kind of like a kookaburra but more melodic]*

Aside: Did I not say they have the best laugh? They have the best laugh.

Alie: I was trying to figure it out, like, are you in Tasmania? Are you in the UK right now?

Em: *[laughs heartily]* Yeah. I had kind of an evacuation moment *[laughs]* during the pandemic.

Alie: Yeah, okay. So how long are you back?

Em: Man? I dunno. I mean, it depends. Oxford was like, "Go home and don't come back," so... *[laughs]* I don't know. I might not ever go back. I mean, I might go back, but I'm not counting on it, you know? *[laughs]*

Alie: Yeah. So for the foreseeable future, you're home?

Em: Yeah, which is really nice actually. It's really good. Tasmania has a lot to change right now, especially in the current political climate, and I'm really excited to be a part of that.

Alie: When I clicked on your bio, I was like, "Excuse me, a *what*-ologist??" That's the first thing, of course, I homed in on. If someone has 'ologist' in their bio, I'm like, "I'm sorry, you'll be followed, and I will be tweeting at you." And I looked it up and I was like, "Fuck! – Tasmanian devils AND quolls?!"

Em: And things called phascogales and antechinuses. Dasyurids are the most gnarliest animals, let me tell you. They're so cool.

Alie: In researching, just like a basic Google search, 'what kind of animal this is', it's just this thing that looks like a cute little guinea pig feasting on raw meat, and I'm like: What. Is. Happening?!! Can you give me just a very rough description of what Tasmania is like for people who literally probably think it's a fictional place?

Em: *[laughs]* Well, so I'm going to maybe do some code switching here in terms of referring to Tasmania. The Palawa kani - which is Tasmanian Aboriginal speak - word for Tasmania is Lutruwita. And being a non-Indigenous Tasmanian, I feel a great responsibility to acknowledge the people who own this land that I stand on, this stolen land. So I'm in Nipaluna, which is Hobart. Tasmania is an incredible place. The beauty here is amazing. We have these plants called pandani plants, and when I say pandani you might think of like pandanus on a beach, but these things grow up in, like, moorlands, up on high mountains and they're massive. They're like three to four meters high, and they've all got this big shaggy coat, like a big winter coat. They're the largest heath plant in the world.

We've got these massive gum trees that are, like, pyromaniacs that drop their leaves and their bark. They're the tallest flowering plants in the world. And then we have, like, incredible alpine tarns that have been formed through rocks cutting through glaciers, and magma, and stuff. It's a very awe-inspiring landscape.

You come to Tasmania, you fly or you take a boat in, and the minute you get here, I think, your world changes. I've never found a place like Tasmania and I've traveled quite a lot. I think a lot of Tasmanians, especially queer Tasmanians, end up leaving. It can be such a scary landscape to grow up in, but it draws you back.

Aside: If you're like *[whispers ashamedly]* "I don't even know where Tasmania is," that's okay! We're not going to tell anyone. Tasmania is a heart-shaped island. It's one of Australia's

states, off the South East Coast, like where America's Florida would be. It's off the coast of Melbourne and it's about the size of Ireland or West Virginia. It's got a population of about half a million people. To the east of Tasmania is the larger patch of earth that we call New Zealand. Because Tasmania is more souther than the rest of Australia and thus closer to the South Pole, it's a little cooler than mainland Australia. It has all four seasons, which is more than I can say for Los Angeles. It's got ferny, mossy, cool rainforests, and mountains, and bays, and beaches! It's gorgeous. But wait, did Em mention that queer Tasmanians leave?? Let's get into that.

Em: Tassie's a really weird place. When I was growing up here, I just really didn't see anyone openly queer. It was really a very anti-gay, anti-queer landscape. Last year for pride month, we had a lovely guy called Alex Bond come and talk to us. He works here at the University of Tasmania part time. I didn't realize he actually worked in Tassie because we were in Oxford, and when he started talking about Tasmania, I just burst into tears because I've never heard of a queer scientist from here.

It was a really isolating place. For a long time I was really super closeted. I went through lots of conversion therapy at my school and – that's just Tassie. But I'm super excited to be back here and see things changing. It's a very backwards place. I mean, I love it. I don't want to bash Tassie too much – I love this place.

Alie: It's a beautiful place and it's people like you who speak up and make it even better.

Em: Awww well, I hope so. It's just... I feel like I want to be that kind of role model for other queer people because it was just so isolating to grow up here being queer, and it just wasn't an option to be out. I remember I told my mom when I was like seven or eight and, bless her heart, she was like, "You just need to keep that quiet." It was just how things are, you know? But not anymore. I won't let another generation of Tasmanians go through that. You know, like it won't happen again. *[laughs]*

Aside: Don't mind me just legit crying. But also, Tasmania, let's continue to look at its good.

Em: I could drive for like half an hour and be in the middle of nowhere. I wouldn't see a soul for weeks. 20% of the state is a massive national park, an incredible, world heritage site, which will be preserved hopefully for forever. We have really incredible endangered grasslands. If you want anything, you come here, you'll find it. We have these massive things called cave spiders that live for 80 years and have sex for 24 hours at a time. *["Ohaaaaay..."]* They're incredible. *[laughs]*

Alie: Oh my god!

Em: This place has so much to offer. And the history here is so rich in terms of Indigenous and First Nation people. I feel quite privileged; I've worked in the parks and wildlife service for a while and I've been able to engage with that a little bit as a non-Indigenous person. It's just a great privilege being a Tasmanian.

Alie: I've never been!

Em: You have to come! It's incredible. *[laughs]*

Alie: I've never been to Australia, I've never been to New Zealand. I've never been down there. So I know I've got to just stowaway on a freighter ship and find my way down there.

Em: *[laughs]* That would be easy enough.

Aside: I hear the coffee [*Aussie accent*] deeown undah is amazing too. Also, my accent is impeccable. [*"No. It's not!"*] And y'all: the critters.

Alie: Now, Tasmanian devils. We have heard about them via *Loony Tunes* for years and years and years. And one question I got on Patreon – we'll get to Patreon questions in a bit – but it was, like, are they real? A lot of people are not aware that they're actual animals. So can you tell me what one is?

Em: [*laughs*] Yeah, so Tasmanian devils are real. [*clip from Seinfeld: Jackie Chiles, "They're real, and they're spectacular."*] They're just very sweet little things. This is my favorite question to answer about them because in *Looney Tunes*, Taz is this crazy, tornado-like animal that rips up things in his path and he's quite aggressive. [*clip from Looney Tunes: Taz making crazy Taz noises*] But when you catch a devil in a trap, they are just the most smoochy little babies. They just sit on your lap and they let you do whatever you want. You can put your finger in their mouth, take a biopsy of their tumors. You can take blood from their ears. You can give them a little pat. And they're just so calm. [*laughs*]

A part of that is shock, I guess, but when I first worked with them, I was like, "Oh, well, we're going to have to wear massive gloves and stuff." The person who was teaching me was like, "No, no, no, they're really chill," and just dumped one on my lap. [*laughing*] I was like, "Oh my gosh!"

Alie: How big are we talking? Cat? Dog? Breadbasket?

Em: [*laughs*] They're kind of the size of a Maltese, like a small dog. They're not big. They're just, they're real bouffy. They've got massive bouffy heads.

Aside: [*uncertainly*] Bouffy?? [*computer generated voice*] Bouffy: Adjective, Australian informal. Voluminous or puffed out, regarding the hair or sleeves. Also means muscular and strong but stupid.

Em: Like chunky, chunky boys. Dasyurids is the family that they're in with quolls, and antechinususes, and phascogales, etc. It means 'hairy tail', so they all have these really hairy tails. But devils specifically store fat in the base of their tails and they have these little quite big bums. [*Derek Zoolander: "Derriere extraordinaire."*] You can feel how healthy your devil is. Some animals, like a sheep, you might feel back behind or in front of its hip bones to see how much fat it has. For a devil, you squeeze its little bum [*laughing*] and you see how healthy they are. I think [*laughing*] it's quite sweet.

Alie: Oh my God, your field work is, like, a badonkadonk.

Em: [*laughs loudly*] Oh my gosh, it is! That's crazy. But they get their bad rep and their name devil from when invaders first came to Lutruwita/Tasmania. You have to cut to a noise of a Tasmanian devil because it is other worldly. At our farmhouse we have devils under our porch, and when they're feeling particularly vocal and want to have a little bit of a sing, it's like the devil has literally arisen from Hell and is about to eat your soul. They have a really horrible voice.

Aside: Are you ready to hear one "having a bit of a sing"? I am.

[*clip of a Tasmanian devil screaming like a possessed child in a horror movie*]

Alie: It's like me at karaoke.

Em: [*laughs heartily*] Yeah.

Alie: Drunk.

Em: Actually it does sound a bit like that. Or, like a cat in pain. *[laughs]* Not you specifically at karaoke, maybe just anybody at karaoke. I don't mean to hate on your karaoke.

Alie: Trust me – it's me.

Em: *[laughs loudly]* But if you look at a picture of them, they also have little pointy ears so they look a bit gnarly. The skin on their ears is quite thin, and when they get excited, the blood rushes to their ears and makes it look like they have little glowing red horns, basically. When invaders came, for the first time in the 1800s, they heard this noise, they shone a light, and they saw this pointy thing, and they genuinely thought it was a devil. And then imagine their surprise when a little tiny thing came wobbling out of the bush that's the size of a Maltese, and it came and licked their legs or something. *[laughs]*

Alie: Did you grow up... I mean, you grew up maybe seeing them under the porch and stuff. When did you decide, "Okay, I am going to dedicate my life to science and studying these little critters?"

Em: I was really lucky that I was raised by my grandad my mum. My grandad was an ecologist, he was a botanist. He always really encouraged me to, like, follow what I wanted to do. He would take me out to sewage treatment plants and things to look at plants and stuff. Yeah, I like plants. I love plants. They're really cool; they're really an important thing. I like looking at them and I enjoy their presence around me, but that was never my thing. But I remember seeing, like, devils... Devils are a pretty iconic animal. They have been since I've been alive.

I cannot tell you... In the dasyurids, there's so much cool stuff going on and so little is known about them because they are quite elusive. And until the facial tumor came around with the devils, there wasn't much research being happening on them. It was all very neglected in comparison to other animals like, say, the counterpart in the UK might be a badger or something. There's quite a lot of research focused on those kinds of animals, whereas our little carnivores get kind of neglected down here. And they're so special. Seeing a devil in the wild, it never gets old.

Alie: Oh, I couldn't take it. I'd be so excited.

Em: It's always... It's fun seeing the ones we've caught before. Every moment is joyous, in a way. So, that is kind of what attracted me, there's not much research being done on them. They're really interesting, all of the species, all of the families there.

Alie: So, Tasmanian devils... marsupials??

Em: Yeah, they're marsupials. They have a pouch, which is called a marsupium. That's just a random wanky fact for you. You should have a section called 'Wanky Facts'.

Alie: You need your own podcast called, *Em's Wanky Facts*.

Em: *[uproarious laughter]* Oh my god, that would go down so well.

Alie: Seriously. Let's talk!

Aside: Okay, Em's Wanky Fact Number One: Marsupial pouches are called marsupiums, and Tasmanian Devils have them! But, let's talk teats.

Em: This is one of my favorite facts about devils and quolls, I think also the smaller dasyurids too. They only have four teats. So, when they are born, they've got to... And it's true for all marsupials, all things that have pouches. They're born through the vaginal canal and they've got to climb a little way to the pouch. Devils have four teats and quolls have six teats, but they give birth to 40 babies! Forty to sixty babies have to crawl from the vaginal canal, find their

way to the pouch, and get onto a teat, and only the four - in the case of the devils, six in the case of the quoll - survive.

Alie: Oh, my god!!

Em: I know! Then the mom eats the rest of them!

Alie: [*screams*] OH MY GOD! Oh my god, that is *ruthless*.

Em: Isn't that crazy? Imagine eating your own babies. [*laughs*] A lot of them. All of the time.

Alie: A lot! Like gummi bears. Squishy and little.

Em: Yeah! They're the size of a Tic Tac.

Alie: Oh, my god, like little popcorn shrimps. That'd be like if we had a bunch of babies the size of popcorn shrimp.

Em: [*laughs*] It would be. Then the ones that made your way to the breast, the strongest ones, the rest they'll just be like, "You're too weak." That's why, maybe, when they're adults they're quite chill, because they got all their really aggressiveness out of the way when they were just immediately born. Like, elbowing their siblings out of the way to get to the teat.

Alie: How are the ones that find the teat? The chosen four. How are they not total assholes? You'd think that, like, only the assholes survive.

Em: [*laughs*] Look, I mean, it would be... It's probably a combination of, like, what time were you born and are you directionally challenged, because if they walk the opposite way they're going to end up on the floor. It's just luck. I think it's just complete luck. I'm not sure people really understand who wins because you can't get to the other one in time because the mum's already had a bit of a lick or eaten them all. But yeah, they probably are assholes. If you found a devil jellybean on the floor and you tried to raise it, maybe it will be the sweetest, kindest angel baby you've ever met.

Alie: Oh my god. Can you just imagine? You're just born, you take a wrong turn, you wind up at your mom's butthole and she eats you.

Em: [*laughs*] Relatable. No, it's so hard. It's such a hard life being a devil or a quoll. If you start off on the wrong foot, your whole life is REALLY HARD.

Alie: Yeah, they all deserve book deals Now, what about... They're carnivores. So like, a mom, she's got to nurse these things so she needs meat.

Em: Yeah.

Alie: Do they go straight from the teat to eating, like, insects, worms? What happens?

Em: So, it's different. For devils, they'll be stuck on there for quite a long time. The teat swells in their mouth and they get stuck there for a while until they grow and open their eyes, then they kind of ride around on mum's back for a bit. They'll still be suckling at that point, but they should be trying them out on carrion, like dead meat, scavenged meat. They're pretty much obligate red meat eaters. They don't really, kind of, stoop down to the level of insects like a quoll would. [*chuckles*] Quolls mostly eat... Eastern quolls eat primarily insects and stuff. Devils are not apt hunters.

Alie: Oh!

Em: No, no. They basically eat... A recent study was published, they put cameras on devils to see what they do. One devil tried to eat a wallaby and the wallaby got away. Then it just stood

there growling angrily, huffing, and like getting upset with itself. Could you imagine that? Can you imagine, it's like if you go to the fridge for the third time, there's nothing you want to eat and you just stand there and get really grumpy. It's kind of what the devil is doing there.

Alie: It's so cute!

Aside: Okay, a side note. If you're like me and you struggle to form mental pictures of southern hemispheric marsupials that, frankly, sound fictitious, a wallaby is about 10lbs and kangaroo-looking. It's a little smaller than a Tasmanian devil, but they're macropods, which means that they have big feet. Apparently, tassies are like, [*whining*] "I can't even eat this if it's still alive. [*cry-screaming*: "So pissed!"]

P.S. What type of leggings do Tasmanian devils have?

Em: So, they've got their back legs. They're kind of like a hyena in the way they walk. They've got really long back legs so they like kind of hobble. They can run pretty fast, up to 25km an hour. They kind of wobble more than run, in a way.

Aside: Okay, I looked this up. If a Tasmanian devil were chasing you to try to beat your ass, you'd need at least an electric scooter to get away. So, GTK. Good to know.

Em: They're really just, like, scavengers. So, they eat a lot of roadkill. When the Tassie tiger, thylacine, was alive they would have eaten the remains of their kills. In their absence they mostly rely roadkill. So, it's a pretty chill life for a devil baby because your mom would just ruck up... She will just smell, like, a dead wallaby on the road and pull it off the side, and you're all sat eating together. It's quite a family affair in that way.

Alie: If there is a marsupial that's been roadkill, I understand that you should try to check if there's any babes in there?

Em: Yeah, little babies. Yeah, you should always... That's a thing, almost like a rite of passage as an Australian. You check the pouch. Often in a pouch there will be a little pinky, which is like a really little baby jellybean stuck to the teat. It's hard to raise such small babies. It can be done with the right carers. But in lots of cases there will just be a joey sitting by its mum or in the bush. The other thing is, devils are endangered, from facial cancer, but also from roadkill. Around 400 devils die every year on the road because they scavenge off roadkill. So, it's really important, anyone in Tasmania is listening to this, drag the roadkill off the road so devils don't get hit by cars accidentally.

Aside: Okay, Tasmania, maybe keep some taco tongs in your trunk and do just a little Good Samaritan carcass-dragging now and again. But stay safe, please.

Now, Em has mentioned facial tumors a few times and don't worry, we are going to get into what the hell is happening with these tassie tumors in a bit.

Alie: Tasmanian devils are only in Tasmania only, right?

Em: Yes. They used to be on the mainland of Australia but they haven't been for about 4,000... 3,000 years. It's unknown why they're not there, but that timeframe coincides with when dingoes made their way to Australia, and dingoes are quite avid hunters. There was no land bridge to Tasmania at that time, so that would have been... Yeah, they would just kind of slowly gone extinct on the mainland.

Alie: [*sadly*] Aww. Now, what about the quolls? Which, by the way, I thought at first was a quokka, which is a different thing.

Aside: By the by, so quokkas are those blisteringly cute little critters who are related to wallabies but they look like a mix between a hamster and Tom Hanks. And, as it turns out, are not flesh shredders.

Alie: And I was like, “A quokka is a *carnivore*??”

Em: That's horrifying. *[laughs]*

Alie: Like an evil clown kind of a way. Like sweet, and cute, and just blood thirsty.

Em: Oh god... yeah.

Alie: But a quokka and a quoll are different. What is a quoll?

Em: So, there is a couple different types. In Tassie we have spotted-tail quolls and eastern quolls. They're just like devils, but they are actually psychotic. When you catch a quoll in a trap, you are lucky to walk away with your face still intact from that encounter. They're really quite manic animals. They're quite different to devils. They will actively hunt. Basically, they're like big cats. We call them native cats, actually. They're like big cats, big long tails, and spots all over them. So, a spotted-tail quoll has spots on their tails. The eastern quolls has no spots on their tails. They kind of have little mousey faces and the tiniest little pink nose that you just want to boop. But you know if you boop you won't ever be able to speak again. So, you just have to resist *so much* to not boop the little snoot. *[laughs]*

Alie: So, quolls have more of a temperament that we have thought was belonging to Tasmanian devils?

Em: Oh yeah. It's completely flipped. Devils are the chill dudes, and quolls are like the aggressive cousins that just don't really want to be around you. [*“Can you not, please?”*] It's really strange. And spotted-tail quolls are quite big. They weigh about 3-4 kilos, they're not *that* big. They're really quite light, but they can be quite long. But they can hunt things that are, like, 14-18 kilos.

I remember once, I was sitting by a river and I was just watching a platypus or something, and a spotted-tail quoll just, like, jumped next to me and it had a possum in its mouth. A whole possum! These things are that that big but they can bring down massive prey. It's just incredible what they can do. I know devils are thought to be the apex predator, but I would put my money on the fact that, you know, spotted-tail quolls are doing most of the legwork down here in terms of actually actively hunting and killing things.

Alie: The only way that story could get more Australian is if you were drinking a Foster's.

Em: *[laughs]* Oh my gosh, that's such a blasphemous thing to say. Don't talk about Foster's.

Alie: I don't even know what y'all drink down there. I don't even know. I am so sorry.

Em: *[laughs]* That's alright.

Alie: Sitting at a river, watching a platypus, and then a quoll hops by with a with a possum!

Em: Yeah, that does sound quite Australian, doesn't it? Yeah.

Alie: [*with Aussie accent*] “Then a kangaroo came and punched me, and a crocodile ate the kangaroo...”

Em: *[laughs hysterically]* That's a good accent. That's quite impressive.

Alie: Thank you. I just can't imagine anything more ‘Down Undah’. That's amazing. Oh my god. I need to figure out what kind of beers people drink down there. I'll have to research that.

Em: It's like XXXX, a lower-end beer, I guess, in terms of price. I don't know, we have a lot of craft beer down here. It's quite impressive, really. But honestly, when I was a teenager, there was like one bottle that you could get like one type of beer from, and now there's craft beers everywhere. It's a very changed landscape, let me tell you.

Alie: I bet. You have like, artisanal Vegemite.

Em: *[laughs]* Yeah man, I came back this time and there's like Manuka Honey Tim Tams. I don't know, I don't want to hate on, like, growth, but I feel like that's a bit weird.

Aside: P.S. If you ever want to seem like a Tassie local, order a Boag's if you're in the north, and a Cascade Beer in the south. And bonus: Cascades have a Tasmanian tiger on the label, which is now extinct because of colonization, which is a Stage 4 Bummer.

Also, side note, a Tim Tam slam is when you bite off diagonal corners of this chocolate cream-filled wafer cookie, and then you suck tea through it, and then you jam the whole shebang in your shebang hole. Sounds perfect if you need to warm up with a thermos of tea while you work in the chill of a brisk July. Southern Hemisphere y'all: It's topsy-turvy.

Alie: Now, what about field season? When is field season for you? When is mating season? And also, let's talk about their little face tumors. I didn't even know that was a thing.

Em: Yeah. So, I'm not doing fieldwork right now. My kind of work is desk based. I'm doing some modeling of the facial tumor and stuff. So, if we're talking about a life cycle of a devil, they're breeding about February to May, and their gestation is about... I think that it's about 21... or it could be 51 days. It's one of those. It's one of those numbers that ends in 1. *[laughs]* Something... 20 or 50 days.

Aside: Okay, I looked it up, and for 21 days they cook indoors, before crawling out of her vajeen, and then dodging her late-night munchies, and beating dozens of siblings to make it to a teat.

Em: They stay around with mum until about summertime here, so that's like November-December. They stick around with mum for quite a long time, really, while they're growing in the pouch obviously, and then they're kind of learning how to be a devil. By December, they're all really trying to find their own homes. Devils aren't territorial, they are solitary though. They're not territorial in the way that you might think of, like, a lion being territorial or even a quoll being territorial. They do use latrines, so they'll all poop in the same place and they'll communicate by anal gland secretions. Like a little dog, they have little anal glands on the side of their bumholes and when they poop they secrete a substance that kind of communicates different olfactory cues to their mates around them, but they don't have territorial territory boundaries. They do like being, kind of, in their own space.

So, in December little dudes will kind of start walking around trying to find their own homes. It's kind of not opportune. It's good for them because there's a lot of easy food around and a lot of things are getting older and dying, so it's easy prey, but there's also a lot of people on the roads because it's summer, and everyone's going out to their shacks, or to the beach, or up to the bush. So, we get a lot of young devils dying on the roads, which is a shame because they haven't even got the chance to start breeding, and they haven't even got the chance to survive the facial tumor yet.

We lose a lot of young devils every summer because they move around dusk and dawn. It's hard to see them because they're jet black, basically, less a little white chop on their bum and a little white chop on their chest, so it's really hard to see them. If you're doing 100 kilometers

an hour down the highway and a little devil's feasting on a dead wallaby in the middle of the road, you're not going to see in time. There's a big push for people to really slow down at dusk and dawn because it's unnecessary deaths. We can't really afford it at this point. We lose so many devils to - here's a segue - to the facial tumor.

So, it's called Tasmanian devil facial tumor disease or DFTD. It was first sighted up in a place called Narawntapu in 1996. It's one of only two mammalian transmissible cancers. The other one is like a really, really old dog penis cancer.

Aside: Did you expect to hear the stack of words "really old dog penis cancer" served up into your ears like a club sandwich today? No, no you didn't. And if you're a dog with a dick and you get canine venereal transmissible tumor, how do you deal with it? According to the paper "Diseases and Surgery of the Canine Penis," a dog dick doctor would recommend partial or complete penile amputation depending on the tumor type and location. Aren't you glad you're not a dog? So is everyone, except maybe Tasmanian devils.

Em: It's hard to tell, but what we think happened is a female devil up in the northeast of the state got cancer, and through their behavior and also their low genetic diversity, it has been spread throughout the state. And their behavior, they are quite gentle with people and that could be an element of shock and stuff, but amongst themselves, they are quite grumpy. They don't have really good eyesight. They mostly use their smell, their hearing, and their really long whiskers to navigate the landscape. Also, because there's not much carrion; there's not much food to eat really. It's mostly roadkill. Things will die naturally, there'll be a dead sheep in a field or something, but generally there's not a lot of food around, so they all have to share. They're solitary and they don't like sharing. They're being forced now more than ever. Especially as humans encroach on their habitat more and more, they're being pushed together and having to eat together.

So, when they're eating, they're all going a bit crazy. They're getting a bit excited. It's like if you walked into your favorite restaurant and you saw a big plate of pasta and you were like, "I haven't eaten in days!" and you just start crying. *[laughter]* All your friends haven't eaten for days too, and it's all your favorite meal. You all start racing towards it and you get a bit grumpy, it's natural. *["Leggo my eggo!"]* It's normal, I would fight over pasta, they fight about, you know, dead possum.

Alie: Absolutely. Especially when you're like, "I made it to a teat! I'm going to make it to the dead thing."

Em: *[laughter]* Yeah, "I almost got eaten by my mom. I need to eat this."

Aside: Wait, what were we talking about? Oh yes! Fleshy cancer knobs that look like you skinned a plum and it bore its way through their cheeks, eventually killing them breaking my heart a thousand times over, AKA: DFTD: Tasmanian Devil Facial Tumor Disease which, let's be honest, should be called *TDFTD*, but it's none of my business. Anyway, the get bitey with each other because of these long brunch lines and also because they get horny.

Em: And if they get too close to each other, they naturally bite each other on the face. But what that means is... Probably what this female did is she had this cancer, she bit another devil on the face, and then the cancer transmitted through that. Probably because they're quite closely genetically to each other... They went through quite a few bottlenecks even prior to invasion. Climate change over the millennia has made them shrink and grow, and shrink and grow. Obviously, post invasion there was a lot of bounties out on their heads, like Tasmanian tigers, because of the myth that they were eating their sheep when they actually couldn't hunt a

sheep. They've grown steadily since then until about the '90s, and they've declined quite rapidly with this tumor.

The interesting thing about it is it's clonal cells. I want to say here, I'm not a cancer researcher, I'm just an ecologist. There's a lot of research out there that I'm not privy to, but from what I know it's clonal. When you biopsy the cancer cells, it's got the first female devil cells in it, not the devil host cells.

Alie: Wow!

Em: Yeah, they're so rare, these transmissible cancers. There's only the one dog penis one and the devil, but then in 2014, a second strain of the facial tumor showed up down in the south of the state, which has male genetics. So, it's almost like they've been struck by lightning twice. They had this first one in 1996, and then a second one emerged. They're two different strains; you can tell because of the DNA of each of the strains. Basically, there's been declines of up to 95% of devils in some areas. There's probably less than 10,000 or 20,000 devils. Prior to DFTD happening, we would have had about 250,000 devils, something like that. It's a lot of deaths really.

And it's almost 100% mortality rate because what happens is, they get it on their mouths, and they can get it elsewhere, but they don't bite anywhere else really. If they did bite somewhere else, it would infect there, but it's very facial orientated. Basically, it means they just starve to death over a period of a year or so, slowly. It's really sad and horrible. We've had no examples of vertical transmission. We haven't ever seen a mum pass it on to her babies, but we have seen examples where a devil might have different tumors from different individuals. So, say they might've been bitten three or four times. The cancer is quite a stable cancer, but it will mutate within an individual. While it will still have the same genetic composition of that first devil that had it in 1996, or the one in the south in 2014, it does mutate too. You can tell if an individual has just one tumor that spread or multiple different tumors.

So, that's the basis of it, but there is some hope. I mean, it's incredible, the amount of attention that the devils got with this through cancer researchers, ecologists, and biologists. It has been an incredible effort to help them. We still don't have any kind of cure, but what we have found is there are individuals that have recovered from it. [*"Nice."*] So without any human intervention, they've reduced the cancer in some way themselves, probably due to some kind of immune response. There have been a few examples of devils shrinking their own cancers in a way, which is badass as hell.

Alie: Yeah, for real. Do they think that a vaccine is possible?

Em: I think they're working on a vaccine. The Menzies Institute here at the University of Tasmania is working great guns to find a cure for it.

Aside: Dr. Bruce Lyons of the University of Tasmania has said of the vaccine work they're doing there that their research has found that:

The devil's immune system can, in certain circumstances, eradicate the tumors. The next step is to 'connect the dots' to hopefully produce a single-shot vaccine.

He continues:

We've still got a bit of a way to get there, but compared to the history of tumor immunology in human work, the achievements with devils in the last 10 years are outstanding.

So, that's promising! I mean, if they would just stop nipping at each other while eating or while having sexy times, which is also how these face bites happen, then they would be fiiiiine! But it's not like you can just hand out informational leaflets near wallaby carcasses.

Em: You can't stop a devil from being a devil.

Alie: Yeah. You can't quarantine for a while and say, "Hey, no one bite each other for a while."

Em: We have tried that! They have been quarantining devils on an island offshore of Tassie. They've put a lot of devils on an Island called Maria Island [pronounced ma-rye-a]. [*Mariah Carey: "Why are you so obsessed with me?"*] It's Palawa kani name is Wukaluwikiwayna.

They have about... I don't want to say a number, but I'm going to say a number and it'll be bloody wrong, but maybe like 300 devils there now. They're very genetically diverse devils. There are no roads there. The only people that have cars there are the Rangers. There's no cancer. It's like an insurance population, but also it can feed into the main population too. If you can create more genetic diversity offshore, and then bring that to the mainland of Tassie, you can maybe increase diversity enough that the cancer becomes less of a problem. That's kind of the aim there.

Alie: Oh my gosh. An island full of tassies.

Em: Oh my gosh. They're so cute. When you first get off the boat there, there's a little grotto of devils where all the mums kick their babies out to, and all these little baby devils running around. It's so cute! They're so sweet. [*swooning and laughter*]

Alie: [*also swooning*] Oh my god! Can I ask you Patreon questions?

Em: Yeah! Go.

Alie: Oooooohkay! We got 1000 questions about, um, the *Looney Tunes* character, [*laughter*] and we also just got a thousand questions.

Aside: Aaahhh, but before we get to your howling, screaming, blood-filled, and adorable questions, a quick word about sponsors who make it possible for us to donate to a cause of each Ologist's choosing. This week Em had two great ones, so we're splitting them, with some going to the Save the Tasmanian Devil Appeal (STDA), which delivers funds to research and monitoring programs in response to Devil Facial Tumor Disease, with its key aim to keep Tasmanian devils sustainable in the wild.

Em would also really would like to shout out and support Firesticks Alliance Indigenous Corporation, which aims to create a resilient social and ecological landscape through cultural fire and land management practices. Em said: Obviously, Australia has been hugely impacted by fire in the past few years and Firesticks supports traditional custodians in maintaining and building fire knowledge and practice, and it helps affected communities to heal in the aftermath of recent and future bushfires. To learn more about traditional fire custodianship, check out the film *Returning Patrula* on Vimeo, which I'll link on the show page on my website, along with those two charities.

Donations are made possible by the following sponsors, which you may hear about now.

[*Ad Break*]

Okay, your questions, Patrons.

Alie: And so, I'm just going to kind of lightning round you. Okay. Ashley Curtin has a question that's on all of our minds: What's the goss on their love lives? Do they mate for life? Do they have a

family lifestyle? Do mamas have flings and then raise the babies alone? Like, let's hear the juicy deets. [*enthusiastic: "JUICY!!"*]

Em: Okay, so devils, like a lot of animals, they're quite promiscuous. They definitely don't mate for life. They definitely have multiple different partners. In fact, a baby set can be from multiple different fathers. It just depends on which sperm is the fastest and which is the most virile, I guess. Yeah, they'll just mate with anybody. The breeding season is quite a noisy time.

They're so funny! Like if you just hear the noise they make and imagine that that's like either them being happy to see food or being happy to see someone they want to have sex with. [*laughter*] It's kind of the same noise, and they have a large vocal range. They definitely have olfactory, like scent cue, but they also do make a lot of noise being like "I am ready to have a baby!" [*Tasmanian devil monstrous screech-scream*] So, a lot of noise, a lot of courtship, a lot of singing. Males will just mate with anybody, females will mate with anybody. It's all a big free love fest out there.

Alie: Yeah. It's very much like spring break. A lot of boning. A lot of noise.

Em: Oh yeah. A lot of noise.

Alie: Juliebear, on that note, says: Sorry, but the dong question is compulsory. Do they have multi-headed dicks like other marsupials? By the way, me, Alie Ward, did not know that was a thing.

Em: So yeah... I don't know. Definitely, marsupials do have.... Echidnas, I'm pretty sure I have three-pronged dicks, which is crazy, right?! What is that for? [*laughter*]

Alie: Yeah. Two bonuses! Just in case you lose one. I got a couple of backups.

Em: Exactly. I'm just googling Tasmanian devil penis. I don't know. Oh, there's a picture Oh, it's a four-headed penis.

Alie: My goodness. It sounds floral.

Em: It looks kind of just like a generic penis. It doesn't seem that crazy.

Alie: Alright. I'll google.

Em: Yeah, you should google it because I don't know.

Alie: Oh yeah. I'm going to google. Don't worry. There's going to be an aside on that.

Aside: Okay so yes, dude echidnas have quadradongs partly because the females have a vagina duo. From what I was able to google on the phallus of Tassie, it looked kind of like a sleepy earthworm. Let's meander casually over to butt smells.

Alie: Juliebear also wants to know: What would be more pungent, the spray of a Tassie or Pepé Le Pew the skunk?

Em: Hmm. Well, they're not stinky. I associate devils with... What we do, we trap them in these big PVC pipe things that are circular because it kind of makes them a bit more comfy, then we put them in a hessian bag. So, I kind of associate the Tasmanian devil with the smell of a hessian bag.

Aside: That's a burlap sack, America.

Em: And so that smells quite nice to me, when I think of what a devil smells like. And then also when I go looking for their poop, it's really quite... it's kind of pleasant. Like, I've worked with a lot smellier animals. Quolls are pretty smelly. The thing is, their faces do smell like rotting

meat. They don't spray you like a skunk. They won't, like, skunk on you or whatever, but they do definitely smell like rotting flesh.

Alie: Awww!

Em: So it depends what you're into, I guess! *[laughs]*

Alie: Yeah, associations run strong, you know what I mean?

Em: *[laughing]* Yeah!

Alie: If it reminds you of being out in, like, hiking boots, in the world doing the work you like, rotting flesh is like, "Hmm."

Em: "Hmm." It's kind of relaxing, in a way.

Alie: Well on that note, Ella Sugerman wants to know: What shape are their poos? (I'm hoping for cubes). But that is a wombat, right?

Em: Yeah, wombats have cube poops. And I think recently someone just found out it's because of how their colon is shaped, which is interesting.

Aside: Hey, quick question? Are you eating? If so, skip ahead about like a minute and a half. *["Just to... Just to warn ya."]*

Em: So devil poos are pretty, pretty just generic carnivore poo. They have - they're quite long, almost like a... they've got, like, tapered ends and they're often joined in the middle by hair, because they eat *everything!* When I say a Tasmanian devil is a bit of a grot, they are. They eat bones, they eat teeth, they eat eyes, they eat hair. Like, everything!

I remember once we put out a kangaroo carcass, just because there was a kangaroo around the farm, and it had passed away so we put it out, and I wanted to see what would happen. And the next morning there was the bones, and the next day there was nothing! So, in that way, the *Looney Tunes* character is correct because they are like a tornado eating food. So no, their poo is not that exciting compared to a wombat poo! They have, just like, a lot of hair. It's great, it's like um...

Alie: Like sausages?

Em: Like sausages! And you can see bits of, you know... often if they've eaten, like, a little wallaby or a like pademelon, they'll have a whole jaw inside their poop because their jaws are so small. Getting a Tasmanian devil poo and going through it is my favorite thing. When I go out on a walk and I smell devil poo, I'm down there like Gollum, *["Must. have. the precioussss!"]* like fingering it, breaking it up in my hands. And all these other bushwalkers are walking past me like I'm some kind of real creep, but it's like, "They don't know!" They don't know what's - I'm holding liquid gold basically! It's like everything I could ever want is inside this poop. *[giggling]*

Alie: *[laughing]* They don't know you're a dasyd- *[mumbles purposely]* -ologist.

Em: *[bursts into hysterical laughter]*

Aside: Oh, you thought scientists were normal, boring people? Nope, no. Not at all. That is one giant falsehood.

Alie: Oh - flimflam! I didn't ask: What's the biggest myth about Tasmanian devils? How did I not ask that already?

Em: I think the biggest myth, we've already gone over. The biggest myth is obviously that they're grumpy, and they're really just not that grumpy. I think that's kind of the biggest thing about devils. I think there's a lot of talk about them being, like, real apex predators. I think that's a bit of flimflam too. I think we don't give quolls enough attention; they are really the ones doing the heavy lifting in our ecosystems. They're the ones, kind of like, equalizing everything. I mean devils are important, I fucken love devils, but like I think we don't give quolls enough, like, kudos. Because like, man, they are doing, you know, God's work. I'm not religious, but if I was, I would be Quoll Religious. [*giggling*]

Alie: One Nation Under Quoll?

Em: [*laughs*] I think the biggest... I can't think of anything else, um...

Alie: No, that's a good one!

Em: Yeah, yeah.

Alie: Oh and Kameron Simpson has a question: What is up with their hair coloring being white below their necks, is it random? Is it unique to Tasmanian devils? Does it serve a purpose? As opposed to quolls, they have those spots, right?

Em: Yeah, so quolls... When you see a quoll in the wild - which is hard to do because they blend in so well - they're kind of rusty color or the black or the fawn. And the spots, they break them up in the landscape and they look like leaves, basically. Whereas devils, yeah, it's really, really, really rare to see a carnivore who's black and white. It's such a weird, stark coloring choice. And we do get devils that are just a hundred percent black, and we do get devils that have, like, almost quoll-like spots. It's very rare, but we do sometimes get devils with a lot of white on them. There's been a lot of talk of what it could be. It could be for, like, defense. You know, like a big white band is quite startling to another devil.

And then if they have a big white band, they'll have a matching one on their bum. So it's almost like you can't tell which end is which. Maybe it's the confusing thing? Maybe it's like, "Is this my fat bum or is this my chunky, chunky head? Who knows!" [*laughs*] And I guess because they are nocturnal - or crepuscular; they kind of blur the line between being active at dawn and dusk, or overnight - being black probably helps them. But also they don't have to blend in that well, nothing really hunts them. That's probably why the dingo did kind of decimate them so badly because they are quite apparent. And it's why feral dogs, like loose dog packs here, are a really big issue because devils are quite starkly obvious to a predator.

Alie: Oh, and one more question, from a patron. Jolie Brown wants to know; how adaptable are Tasmanian devils and quolls to climactic change and other changes to their environment like heavy rainy season, drought, stuff like that?

Em: That is an incredible question because: not very well. [*The Price is Right losing horn*] So they're quite hardy things, in other situations. Like fire? Not a problem. Brush it off, shake it off, Taylor Swift. They're kind of fine about, like, those kind of more natural events. Climatic changes; no. They cannot deal with it. So devils, over time, through the fossil history we've seen that there's been massive drop and massive inclines in terms of climate change.

Same with quolls. Like, eastern quolls are probably my favorite animal. And I am, like, obsessive-compulsive, constantly looking at research, being done about them. I'm some kind of like... I'm like a quoll stan, that's really quite... It's kind of creepy. [*laughs*] Anyway, they really are not doing well. And they are really tightly linked, in terms of their population numbers and density, to rainfall and climatic change. And they really do fluctuate quite a lot,

so they're not doing so well. If we're talking about eastern quolls, their numbers are low. The lowest they've been in 230 years. Spotted-tail quolls aren't doing any better. And devils are low, but also for a different reason, for more of the facial tumor kind of side of things. They're not doing well in terms of climate change. None of Tassie is.

Tassie is really... it's a very special landscape, but it's changing a lot. It needs wet winters and it needs, you know, drier, hot summers, and we're just not getting that. Everything's kind of flipped around. Often a word that people don't like to use in science - but they should be using more - is the country is sick. Like, Tasmania especially is sick. The land is sick and it's really heartbreaking to see it, kind of, degrade and degrade, more and more over time.

Yeah, I think if we don't do something quick about climate change, we're going to lose these animals. Like devils and eastern quolls are only found in Tassie. Tasmania became a refuge and now their last refuge isn't protecting them anymore. We've really failed these animals. And we know so little about them! It would be devastating to lose them just because of, you know, how iconic they are. But we just know so little about them, how can we lose them? And what a loss of the world; a huge group of animals that, you know, just deserve so much more attention and funding thrown their way.

Aside: Which is why we donated to UTAS and their efforts. So please, save these little Tassies! Okay, maybe one more question from patrons?

Alie: Casey Handmer, himself an Australian, says that he is not *quollified* to say.

Em: [*laughs uproariously*] Yeah, these are quite *quollity* questions. Heeeeey!!

Alie: Ahh!

Em: Yay! Hehehe! [*giggles and claps hands*]

Alie: One more question. Kathleen Jones says that they, "googled quolls and immediately yelled, 'Fuck OFF!' at my computer, at the top of my lungs. I want to kiss them, but also nibble gently on their ears, but also become a marsupial and force them to live in my pouch." So can I feed them the best snacks? Is that common?" If you work on a quoll, do they like you? No they don't...

Em: They don't.

Alie: You don't want to feed them, because they'll bite your face off, Kathleen Jones.

Em: So, here's a really interesting thing. So cats, domestic cats, are really bad ecologically. They kill a lot of birds. They kill a lot of native rodents and stuff. So, Menna Jones, who is my goddamn idol... If anyone wants to look at Tassie devil research, you just go to Google Scholar, type her name in and you'll be in devil and quoll research for hours. She's incredible. And also my supervisor. [*laughs*] So anyway, she's great.

One of the reasons I wanted to work with her, is she's really passionate about making cats illegal in Tassie and swapping that over with dasyurids. And so, you know, we call quolls our native cats. The natural kind of thing would be to bring quolls into that equation and take cats out. But let me tell you... Okay, I would say I am for that, because I don't like cats in our landscape. They are really quite disastrous.

But I've raised quolls before and they are great. Like when you have them from when they're babies and, you know, if you're with them every day, they do love on you and you can feed them. They love crickets. Their favorite food is crickets or a little bit of peanut butter. They used to eat me and my dog's food and stuff. But the thing is, if you go away for even like a day

and you come back, they're like, "Who the hell are you?!" and they try and kill you. And then it's another, like, three weeks of them being... you have to be there all the time. *[laughing]* They've got good hearts, but they have really bad memories! You just couldn't leave them alone!

Aside: So quolls; pretty much like a cat with polka dots. But also, will treat you like a stranger and chew your face off. So maybe we don't swap kitties for quolls.

Em: I would almost be, like, more inclined to be like, devils are the way to go if, you know, we wanted to go on that path of getting rid of cats and putting in a native replacer. Quolls are incredible animals. I'm not saying go out there and get one and put it in your home. You'll probably lose a hand. But if we're talking about what's best for Tassie and what's best for Australia, it's to not have any more cats and to have more native animals around. And devils are a lot more... generally they're quite a lot more happy to be around humans than quolls are. They're not happy to be around humans, but they do it more than quolls do.

Alie: Oh my gosh! Is it legal to keep a Tasmanian devil?

Em: No. So like carers, you can get, like, a wildlife carer permit. And then if like a devil, like an imp comes in... That's what they call the baby devils. They called imps. *[laughs]*

Alie: Awww!

Em: So if an imp comes in you can raise it, but it's quite a specialized thing and they're quite hard to raise. And the quoll's that I've raised, it's hard work man. You've got to have a lot of space, and you've got to have a lot of time and do nothing else. Before I moved to Oxford we used to raise kangaroos and stuff, and our last kangaroo Kara, she was great! I would carry her around in a pouch, around in the streets, because she didn't like being alone. When she wanted milk, she would, like, rock her pouch on the door and just make a lot of noise and be real grumpy. If we want to talk about things that make devil noises, look up what a kangaroo sounds like, like an eastern grey kangaroo.

Aside: Oh boy, here we go! *[growling-snarling-snorting from kangaroo]* This is from a YouTube video called, "Kangaroo sounds and pictures for teaching." And I just want you to know, I looked, and the top upvoted comment reads, "Sounds like me getting up from bed." *[kangaroo grunt repeated]*

Em: They sound like the devil. So it sounds nice, it sounds dreamy, "Oh wow! You raised a kangaroo, you raised quolls!" It's hard! It's hard, you don't sleep for days - weeks! And it's rewarding, because they get to go back out where they belong. But it's also quite hard to say goodbye since you spent so much time, but it's good because you're doing good for the environment. It's a lot of blood, sweat, and tears and... you know, they don't really like you! *[laughing]* They're not really gonna come cuddle you. They're going to look at you, like, "When are you going to feed me crickets, bruv? Jesus!"

Aside: And wherever you are out there, before you start painting a Tasmanian fern forest in your devil nursery, or dreaming up an Instagram handle for your soon-to-be famous wild pet influencer, maybe just, like, don't. I mean, I get it! I would love a house wombat, but I gotta shatter your dreams here...

Em: I wouldn't be for, like, exporting devils across the world as pets. But I think locally, if we could boost numbers in that way, it would be interesting to see what happens. *[laughs]*

Alie: That is. I mean, I'm going to stick with a dog. It's just literally so easy.

Em: [*cackles with laughter*] Look, that's fine, yeah! I feel that. Yeah, yeah.

Alie: As I record this, my dog is asleep on her back, just spread eagle on her back. She's about the size of a quoll, or Maltese actually.

Em: Aww! My dog's a Maltese, he's sitting on my lap. He's a very smoochy little boy, he's looking at me like, "What are you doing? Why are you making so much noise? It's 9 o'clock!" [*laughs*] He's a very grumpy boy!

Alie: Awww! Yeah, I think I'll stick to dogs. And okay, the worst thing about what you do? The thing that suuuucks the most about being a da- da- mmm... wait-

Em: Dasyurologist.

Alie: Thank you!

Em: Now you go, you got to say it!

Alie: ... Dasyurologist.

Em: Yay! That's it!

Alie: Yay, I did it!

Em: [*laughs*] I think the worst thing is I haven't been actually able to do fieldwork. Because I've been working in Oxford, I've been working with a really cool team, working with really cool tech to try and bring that over here. But also, like, learn more stasy stuff to bring that back to Tassie as well, with a really cool team in Oxford. So the worst part, has been for the last couple of years, I haven't been able to do any fieldwork, or see a devil, because I've been in Oxford. And that my work is now quite desk based, which is not what I got into ecology for. But that will change. But also I think the worst part is that... The worst part, genuinely... That was the worst part for me selfishly, is that I haven't been able to get out there and see them. But the worst part is seeing them with the cancers. So if the cancer is so far along that they're starving to death, we put them down, and that is just the saddest thing.

And even... For example, a mum's teats are enlarged, we will send her back, even if her tumor's so bad, because we can't let her pups die. So it's an equal tie, between putting them down or letting them back out if you know what their fate's going to be. That is truly, truly heartbreaking. And it never gets easier. Like it just... Oh my gosh, thinking about it now makes me want to cry. Because it's just, like, these pure, gentle babies that through no fault of their own, have this horrible transmissible cancer. Also it's quite horrible. It smells bad. You can tell when you have a devil with a facial tumor when you get it, if you walk up to a trap, because it just smells, like pus and really ganky. I don't know... is that a word?

Alie: Ganky.

Em: That's my new word!

Alie: Em's Ganky Wanky Fact Corner.

Em: [*laughing*] Oh my gosh. Amazing. Oh my God.

Alie: You could start a podcast!

Em: But yeah, that's the hardest part.

Alie: Oh! And then what about the best? What about just the thing that you looove the most about your job?

Em: I think seeing them, like after you have processed them, so after you have them on your lap and you're doing what you need to do with the quoll or the devil, seeing them run back to the bush. I remember the first time I ever saw someone release a devil. She's an incredible researcher, she said, "Go forth and prosper!" And this little devil just, like, looked at her and then jumped into the bush. And I was like, "What! This devil knows exactly what you're talking about. He's going to go and have a friend and mate now. I can guarantee you this devil's on a mission now!"

It's very inspiring. They just leap and they're gone in a second. That's kind of the most incredible part, like, being able to be with them for this, like, short amount of time. It's such a privilege and an honor to be able to, like, be in their presence. It's almost, like, awe-inspiring sitting with these animals. And every individual one is so important. Every single piece of data is so important for the future of these devils and quolls. So, you know, that's kind of the best part. And then also, a lot of my job is out, like, sitting. I go do work and that, and then in the afternoon I go sit in the bush and drink a beer and just listen to devil's screaming around me. You can't not be so happy in those moments, right? It's really hard to be sad when that's your life.

Alie: And that's like the ultimate expression of, like, "I hate to see you leave, but I love to see you go," because they do have those bubble butts and it's just... What a joy to watch them walk away.

Em: *[laughing]* Yeah! It's like, "Woah!"

Alie: "Take your cute little butt out of here!"

Em: Yeah, shake that little tail! Incredible! But anyway, thank you so much, this has been so nice! A great start to my Wednesday morning. I feel so happy!

Alie: Oh my god! And my Tuesday afternoon!

Em: *[laughs]*

So ask smart, hilarious people, really ridiculous questions about animals you may or may not have thought really exist, because the facts are astounding and their laughs are contagious.

So you can follow Em Dale on Twitter [@CarnivoresEtAl](#), they also tweet about other great Tassie scientists and are just an online joy in general. There are links to the charities supported in the show notes and more links will be up at [Alieward.com/Ologies/Dasyurology](#). And we are @Ologies on [Twitter](#) and [Instagram](#), please be friends with us there. I, myself, am [@AlieWard](#) on [both](#). Say hi.

Ologies visors, and hats, and stickers, and T-shirts, even bathing suits are available at [OlogiesMerch.com](#). Thank you Boni Dutch and Shannon Feltus, they are two sisters who host the comedy podcast *You Are That*, and they are hilarious, and they help me manage merch. And thank you Erin Talbert who admins the very wonderful [Ologies Podcast Facebook](#) group. Thank you Emily White, who is a professional transcriber, you can email her at HireEmilyWhite@gmail.com in case you have transcription needs, and she heads up the Ologies transcription team: I see you all, I love you all! Transcripts as well as bleeped episodes for smologites are up at [Alieward.com/Ologies-Extras](#). Thank you Caleb Patton for the bleeping!

Thank you Noel Dilworth for managing interview schedules, assistant editor Jarrett Sleeper of Mindjam Media who hosts the mental health podcast *My Good Bad Brain*, and also co-parents our own grumpy bouffy-bottom devil Gremmie. And of course to the spots on our quolls, Steven Ray

Morris who stitches all the pieces together each week and also hosts his own podcasts, the *Purrrrcast* and the dino podcast *See Jurassic Right*. There's never been a better time to check out his podcast *See Jurassic Right* because he's launching a Back to School series! It starts on September 7th and it features interviews with all kinds of paleo scientists about fossils, and dinosaurs, and awesome topics so if you like *Ologies*, find *See Jurassic Right* and subscribe ASAP to hear the trailer for Steven Ray Morris' Back to School Series starting September 7th. So that's SJR with SRM. Oh yeah! Also Nick Thorburn wrote and performed the theme music.

And if you listen to the end of the show each week, you are rewarded with some sort of tidbit, some kind of secret. This week, here's a life hack; you know how sometimes you'll buy cucumbers, but you never end up eating them, because you're like, "Ah I gotta cut 'em up and stuff!" Okay, here's what I do; I just buy cucumbers and then I put the whole thing in the freezer, and then you can lop it in half, put that thing in a smoothie! Cucumbers in smoothies; they're great. Put them in there with some frozen berries, maybe a packet of, like, Emergen-C. Done!

I also like to throw in some green tea for flavor. There you go, now you have a smoothie. Also if you freeze your cucumber you can slice it up and put it in your water, like ice cubes. And then look who's drinking spa water out of an old Del Taco cup. You? Or me, maybe I'm talking about. Anyway, I hope you enjoy that.

Put a bow in your hair, google a quokka, scream-sing under your porch. It's a big, beautiful world out there. And be nice to each other. Okay, until next week. Berbye.

[*outro music*]

[*"Bust out the TimTams, the Anzac bikkies, keep Nan in the loop with some TikToks"*]

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More links which you may enjoy:

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[Text to speech reader used for the Boofy translation](#)

[The work of Dr. Menna Jones \(Em's supervisor\)](#)

Another great devil scientist Em digs, [Dr. David G Hamilton](#)

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For comments and inquiries on this or other transcripts, please contact OlogiteEmily@gmail.com