Procyonology with Suzanne MacDonald Ologies Podcast December 22, 2021

Oh hey, hi, it's your neighbor who just needs a couple tips on how to start weightlifting real quick, Alie Ward. I'm back with an episode of *Ologies* that honestly... I know what's up, you squealed when you saw it, I get it. You said, "Wow. The holiday times *are* going to be magical; someone DID get me a present. There is joy to the world. Let's talk about eating garbage." Raccoons, okay. Wow.

So, these critters, they have these tiny, alive doll hands, and ample badonks, and they wear carnival cat burglar disguises, they've got striped goth tails. What are they? Are they taking over the world? Why do we love them so much? And what can we learn from them? [deep inhale] ... A lot. Okay, and we're going to do it via the world's most sought-after raccoon expert, who studied zoology and genetics for undergrad and psychology for her Master's at the University of Alberta, kind of a rare combination. She now is a York University psychology professor and an animal behaviorist.

She has studied all manner of animals, from the reproductive endocrinology of marmots, naturally, to rhino and elephant conservation, red wolf sperm, and anxiety in orphaned primates. But the world relies on her, frankly, as an animal behaviorist and a Toronto resident, to field questions about that thing in your backyard, treating your koi pond like a Sizzler. She served as the on-call behaviorist for the Toronto Zoo for literal decades, and if there is a well-made documentary about raccoons, they have probably interviewed her first. Just google "Raccoon nation" if you don't believe me. You're welcome.

Also, thank you to patrons for supporting the show for as little as a dollar a month. You send in questions there, it's at Patreon.com/Ologies. Thanks to everyone who passes episodes on to friends and foes and family, and who subscribes and follows and rates and reviews, those really keep it up in the charts so other people find it. I read your reviews, every single one of them, every week, and they are the singular pillar of my self-esteem, like this one, from Emma Garsch who wrote:

The genius associate at Staples printed so many things for me and is studying to be a marine biologist at CU Boulder, of course she listens to Ologies too. If you're reading this, my dear Staples associate friend, hi, maybe I'll hear you on Ologies one day. -Emma.

Emma and future coral expert, oh hey, I love an office supply store, truly, and both of you. Okay, onto the ologist of the hour, here we go.

She's been at the top of my list for years, but I had this problem of, like, "What ology is this going to be?" There's gotta be one, there has to be one! People love raccoons. Someone had the Twitter handle @Raccoonologist, but then they went off to go study some birds. What about Procyonologist from the genus of the common raccoon, *Procyon lotor*, which means 'before dog creature that washes stuff'. By the way, raccoon comes from the Indigenous Powhatan language, and it means 'the animal that scratches with its hands'.

But the name for this, it's kind of still being debated, but we're going to err on the side of the drier science and also follow the lead of a Reddit post I read about what to call a raccoon studier. In this case, a very knowledgeable, super dry, strawberry blonde, world adventurer, and a thinker about thinking, who indulged me in this delightful chat about compost bins, chaos, whether their bottoms are ample enough, tree sleeping, brain worms, the symphonic stylings of these loping muses, cartoon raccoons, bisexual icons, whether you should invite one to move into your condo, and really, some of the best career and life advice you could ever get from these backyard babies. So,

bungee cord yourself in tightly for a feast of facts with psychologist, animal behavior scientist, professor, and Procyonologist, Dr. Suzanne MacDonald.

Suzanne: I'm Dr. Suzanne MacDonald, she/her.

Alie: I've been so excited; I've been wanting to do this episode for years. People have been begging for an episode about raccoons. Would it be, do you think, in terms of ologies, would it be raccoonology or would it be...?

Suzanne: [laughs] No.

Alie: No? Okay.

Suzanne: No, that's ridiculous. No. ["Full stop."] It's just... We study animal behavior and raccoons are just a species that we study.

Aside: Well, to borrow an expression from your grandmother, "Woomp, there it is." So, the reigning North American expert on raccoons says it's not raccoonology. But holiday bonus, next week I'm going to be dishing up a Not-Raccoonology Part 2, in which we talk to more experts who study these little ring-tailed gremlins. And I asked them, I was like, "What should I call this episode?"

[clips from future episode, various ologists]

"So, a few ideas for an Ologies episode on raccoons could be Raccoonology, or maybe Procyonodology, or even Banditology."

"Procyonology."

"Raccoonology."

"Raccoonology."

"Procyonodology."

"Procyonology makes the most sense. Crafty buggerology would be more fitting."

So, whether you're on Team Raccoonology or Procyonology, perhaps Crafty Buggerology, one thing upon which society at large can all agree is that a group of raccoons is called... a nursery. Oh wait, no, shoot; it's also called a gaze. Okay, well [pronounced with long I then long E] either/either. How did icon and wildlife biologist Dr. MacDonald get so lucky to have a job, gazing at gazes?

Alie: How did you come to study raccoons? How did you end up in this field?

Suzanne: Well, I've been studying animal behavior for 30 years. So, I work with many, many other species, most of the time. So, I work with orangutans, polar bears, and monkeys, and elephants, and hyenas in Kenya. I work with many, many species and the only one anyone ever wants to talk about is raccoons, but that's fine. I started working with them about 10 years ago when I was actually interviewed for a TV show and they said, "We can't find anyone who studies raccoons. Could you (because I study animal behavior) tell us about raccoons?" I said sure, but that nobody really knows very much and that's how I started doing research with them. ["Lucky."]

Alie: Why do you think there is such a fascination with their behavior?

Suzanne: Well, I think there wasn't always [*laughs*] fascination with their behavior. I do think that now that they're more common in cities and people are seeing them in their backyard, especially

during the pandemic I think, that people just really, really find them fascinating because, I think, they kind of... I've had people say, "They're my spirit animal!" Okay, well I really hate that phrase, it seems like a terrible phrase, but I think the idea is that people really identify with them because they're kind of mischievous, and cute, and they hang around, and eat a lot. And honestly, if they could they'd live in your house on the couch with the remote. They kind of have a lot of humanlike behaviors and so I think those characteristics make them appealing. And they're darn cute, how could you not love 'em?

Alie: They are very adorable. Was there something about animal behavior that always fascinated you growing up? What had you steer your career toward this science?

Suzanne: Well, I'm very interested in conservation and the environment and have been since I was a child. So, I started a club when I was 9 on conservation and animal behavior, [laughs] so I don't actually remember any time when I wasn't interested in that. I think a lot of kids are interested in animals and animal behavior. I talk to a lot of kids, and they're all super well informed and wonderful and then they tend to lose it when they get a little bit older and get interested in something else. But I guess I maintained that... I never grew up, I guess, and I'm just interested in animal behavior.

But if we don't learn to coexist with other species – we're just one puny little species on the face of the Earth after all, in probably 2 million others – then we'll all be in big trouble. So, it seems to be more important now than ever.

Alie: Do you ever see a lot of similarities in the groups of animals that you work with? Why do you study the ones that you study, particularly?

Suzanne: Ah! Well, there's always a project in mind so there's a reason to do that. I'm interested in how animals think and so I work with primates because other primates, like us, our cousins, think similarly to us but also have enough interesting differences that we can learn quite a bit about how brains work, which is my primary interest as a psychologist.

As a biologist, I'm very interested in how we mitigate human-wildlife conflict and how we can learn to live with other species without exterminating the other species, which seems to be our go-to as a human. I'm part biologist and part psychologist. So, some of my projects are about how animals think and some of my projects are about, how do we all get along?

Alie: And I suppose when it comes to the animal and human interaction, there's no place like a big city, crawling with raccoons to really study that, I imagine. Right?

Suzanne: It's absolutely amazing. I get on a plane and fly 30 hours to my field site in Kenya, or I can just go in the backyard. [*Alie laughs*] So, it was quite a revelation to me like, "Oh! Well, this is good." I have raccoons in the backyard, and I can test out all my stuff with them on my deck, and they're very willing participants. I can tell you that two of them are going to show up in about 20 minutes and be knocking at the door since that's what they do every night. [*Alie laughs*] So yeah, it's pretty great. There are so many raccoons in the Greater Toronto Area and never any problem getting participants for my studies, that's for sure.

Alie: I bet. Can you tell me a little bit about the studies that you're doing now? When you say that you've got some equipment set up or some studies set up in your backyard, can you walk me through what that looks like?

Suzanne: Sure, it depends again on the project. So, I have done some things looking at how raccoons problem solve. So, can they open up garbage cans, for example. How do they do it? If they're urban animals, are they different than the ones that live in the country? Yes, they are. So, my big

plan is looking at: are the urban raccoons differentiating from the rural raccoons? Are they becoming a new subspecies or species based on their interactions with us? This is a question that really interests me about how humans actually cause evolution; that we are the ones driving the changes on the planet. So, looking at how raccoon behavior changes and how their little brains change, is really interesting to me. So, I can ask them to solve problems and see how they do that.

I've also done some really practical stuff. Testing garbage bins, you call them trash bins I think in the US, for the City of Toronto. So, testing out new organic waste bins which we call green bins,—they are actually green – and seeing whether they are raccoon resistant. Right now, I'm looking at opossums in my backyard, and raccoons, and this is all just trying to get an idea of what's going on because no one really studies these urban wildlife species. They're very difficult to study, you can't bring them into a lab which... psychologists love to bring animals into a lab.

Aside: So, we're going to cover more on what happens when procyonologists try to bring raccoons into a lab next week in Part 2 but woah, it's good. It's premium mischief, so rub your tiny hands together for next Tuesday.

But if you're still thinking about city raccoons versus their rural cousins, what are the differences? Does one tend to wear camouflage windbreakers? Is another snobbier about which pour-over coffee they lap up off a bench? Well, it turns out, city raccoons have gotten craftier than their country counterparts. Because the raccoons that can figure out how to wrestle a locked green bin are rewarded with all kinds of compostable treasure from, like, eggplant peels and shrimp shells, delicious bones, apple cores. They're like, "I came to the big city to make it. And by make it, I mean poop in your hammock."

Suzanne's research revealed that rural raccoons, they just kind of shrug at compost bins. But city raccoons get to work immediately, no matter how expertly engineered they are. And apparently, 80% of metro raccoons could crack a trash can like a pro, while none of the rural ones could. They were like, meh. So, the results? The rise and proliferation of smart, city, sons of bitches. Trash pandas? Think again, you're giving pandas too much credit.

But how many urban raccoons are even out there? So, Suzanne has counted up to 50 in one backyard, which is not a gaze, that's like a legit rager. If you don't want them there, well, you might have to just shut down their trendiest restaurants, such as your freshwater fountains or your birdfeeders. I read that advice and I was like, "They just eat birdseed? Gross." And then I realized that I was literally in the middle of a bowl of granola. Anyway, wildlife is studied in the wild, which might literally mean a backyard, and in Suzanne's case, involves many, many nights of spying on these little living hobgoblins... or not.

Suzanne: I've also measured... this sounds a bit morbid, dead raccoons, to see how their size changes. It's a good way to measure animals, if they're dead. I didn't kill them; they were killed by traffic. Oh my god, it sounds like I'm a monster. No, they were already killed and they, sadly, had already passed away. So, spent a couple of years measuring dead raccoons; that's fun to explain to your friends, that's for sure.

Alie: How did you feel about the very well publicized raccoon funeral in Toronto a few years back?

Suzanne: Oh yeah, what was the name of that raccoon?

Alie: I've got to look it up.

Suzanne: It was a C, like Curtis... it was hilarious. It was several years ago. I was actually in South Africa at the time working with elephants and somebody emailed me, the times are all odd because of

time zone changes. And I got this email with this picture of a memorial for a raccoon, and I was like, "What the hell is happening when I'm gone? What is going on? Has the city lost its mind?" I think... I can't remember what the name was. But anyway, I wasn't in the country, so I thought... when you're removed from the country, removed from Toronto, it just seems pretty crazy. So, I just laughed and thought it was pretty crazy. But they were trying to draw attention to the fact that the poor little raccoon was not removed by the city, [somber music swells in background] that was allowed to just be there in the gutter, it was sad.

Aside: Side note, his name was Conrad. Even the city's official social channels joined the bereavement, tweeting that "Toronto residents are being asked to keep their green bins open tonight in honor of Conrad. #DeadRaccoonTO."

Alie: Yeah, I hope my funeral is as well attended [*Suzanne laughs*] as that dead raccoon because... what a life.

Suzanne: Right, but it also tells you more about the people in Toronto than anything else, oh my gosh.

Alie: [laughs] Canadians, the most polite type of humans.

Suzanne: Yes. It's just, it made me laugh, and of course, I had a bunch of students with me from the UK and they're all like, "What is wrong with your country? What is going on there?" It was pretty funny. Yeah, I was sorry for the raccoon, but we have many, many thousands of raccoons. They're not endangered, it's okay.

Alie: How long is a typical urban raccoon's lifespan?

Suzanne: Oh, not very long. So, raccoons in captivity, there are some raccoons in captivity, we have raccoons at the Toronto Zoo who live a nice long life, probably 16 to 20 years. But wild raccoons are lucky if they make it 3 years.

Aside: 3 years versus 20?! What is happening on those mean streets?

Alie: Aww.

Suzanne: Yeah, there's disease and there's traffic, those are their two nemeses. They are a protected wildlife species, and they have no predators in the city other than traffic is their big predator, and disease. Because their densities are so high, if disease gets into the population, it spreads through pretty quickly. So, that happens every few years, we get a big outbreak of canine distemper, which comes from dogs, and we lose a lot of raccoons that way. It's pretty sad actually.

Raccoons are of interest to the government because they are a vector for rabies. So, they are monitored quite closely, we have no rabies in the Greater Toronto Area population but there have been a few nearby and those are followed very closely. So, any species that is a rabies vector is also monitored. So, you don't want to get too close to any of those species, that's for sure.

Alie: Yeah, are there any tips that biologists want the general public to know in terms of seeing a raccoon in the daytime or seeing a raccoon who is behaving differently?

Suzanne: Yes, everybody says... [chuckles] I get these emails from just random humans saying, "I saw a raccoon in the afternoon. It was rabid, right?" I'm like "No, it was just out in the afternoon." They're not vampires, they can come out in the sunlight; [Alie laughs] they don't explode, they're just out, they're just hanging. Usually, it's females who are super hungry because they're nursing kits. Or it's young ones, like the ones that are going to show up in a couple minutes... young ones, if they come out a little earlier, they get first crack at whatever food is there, so they learn to

come out a little earlier. They are not rabid just because they're out in the daytime. Really, that's just... silly.

Aside: Flimflam... busted. But what if they *are* sick? So, Suzanne describes some symptoms you can look out for, or rather, I guess, listen for.

Suzanne: You know, if they are behaving strangely, vocalizing... They make these god-awful noises when they're sick, it's seriously... [raccoon screeching] When they have canine distemper, they howl and scream because they're in extreme pain and there's nothing that can be done for them, so you have to call the Toronto Animal Services or animal services and they will come and euthanize them. There's no cure for that, unfortunately.

So, if you see a raccoon acting strangely then stay away from it! Don't go toward it, please do not take a selfie, please do not do any of that. You can take a video from a distance and send it to your animal services. In the US there is rabies in the raccoon population in parts of the US, not all of the US, not in California. But you know, back away. I think social distance is ideal with all raccoons. Just give 'em some space, do not corner them. If you corner a mother with kits then she will be mad, just like you would be. Just give them some space, and enjoy them, and let them go on their way. That's the best advice I have. But if they are acting strangely and do look to be in pain, then call animal services.

Alie: And obviously those vocalizations when they're in pain are heartbreaking and probably tough to hear but do they have vocalizations when they're not in pain, when they're happy or communicating?

Suzanne: Oh gosh! Dozens, yes. They're very chatty. Raccoons, well, they have many noises. The babies have noises to get their mothers to pay attention. They purr. People call them different... they don't purr like cats but it's a similar kind of sound. They drill, they chirp, [chirping sounds] they do all sorts of things.

When they're mating... I always get emails about this too. In January, February here it's cold but we often have a day or two that... it's called a January thaw, so it's a little warmer than normal. When I say warmer, it's above 0 Celsius [Alie laughs] so whatever that is, I don't know Fahrenheit... 32 Fahrenheit. So, when it gets a little warmer, in January, they will come out and they'll mate.

So, people email me all the time in January, and they say, "The raccoons are dying." [shrieking sounds] No they're actually mating. They're on your fence and they're mating, and they make all kinds of terrible noises, screaming and yelling, and that's what they're doing. And then they go back to being... they don't hibernate, but they're less active in the winter, so they go back to that. [more shrill, rattling sounds] and then you know, about 63 days later, the females will have their little babies. [cooing, purring sounds] But yeah, every year in January, "Oh my god, the raccoons are dying!" [Alie laughs] Nope, nope. That's just raccoon love, that's just how they sound. [more shrieking, rattling noises]

Alie: Is that part of what you have to study too as a behaviorist? Do you study what those different noises mean?

Suzanne: I don't, not very many people have studied it; maybe one of my students could study it. But it is very, very difficult to study raccoons because you can't really follow them. We did a study where we put GPS tracking collars on raccoons and even that is, well... Once you get them on it's very difficult to get them off because they become trap shy. They're smart little buggers. ["Crafty buggerology would be more fitting."] And it's very difficult to follow them even with collars on, because a collar will tell you that they're in a backyard, they don't tell you where they are. So,

they can be on the roof, in the attic, under the deck, in the house, in a tree, in a bush, you never know. It's terrible.

Aside: So yes, tricky to track. But it could be an interesting study for an enterprising procyonologist or a crafty buggerologist. There's a lot you can hear if you listen to a raccoon.

Suzanne: They chat, they're very, very chatty, all the time with the different sounds. You start to get to know what they mean. The baby sounds are the best, they're sweet and, you know, trying to get their mom to give them some food. I like those ones. The other ones always sound like they're being ripped to shreds. If you hear raccoons fighting you go, "Well, obviously there's going to be dead raccoons in the morning." [a couple squeaks, then very aggressive, terrifying growls and snarls, followed by more whimpering squeals.] There never are. They really just, wow, they're not shy.

Alie: So, you don't have a raccoon ringtone then?

Suzanne: I do not, no, because I'm not insane so... [Alie laughs] that's why.

Alie: Where are they chilling during the day? I know I have raccoons in the yard, I've found a raccoon latrine in my yard.

Suzanne: You're lucky.

Alie: I know, I know. And I understand that there are possibly roundworms, and the raccoon latrine should be disposed of or discouraged, which I guess you could do during the daytime. But in the daytime, are they asleep in a tree over my head?

Suzanne: Yes, they are. So, what we found from the GPS study is that urban raccoons have, I'm going to say, about 10 den sites that they have. And those den sites are up in trees, in bushes, under decks, or wherever they have their spots. It's sort of like, wherever they are in the morning when the sun comes up – again, they aren't vampires, but kind of like that – they find the closest one and they will sit there. They don't use the same one all the time, which is why, you know, sometimes you'll go, "Oh I had raccoons up in the tree yesterday but today they're not there. I wonder where they are." Well, they're probably in the neighbor's tree because that's another site.

So, they move between those sites so they may not come back to your tree for a couple days, or they might be there for a while. It's whatever they decide to do, wherever they've found food. So yeah, they're often up in the crook of a tree, where the trees branch out. They sleep in there and they're really well camouflaged. I mean, I know they're up there and I can't see them unless they lift their head, and then you can see their little faces, but otherwise, you can't see them at all. They have to move or you're not going to see them. I think mine are in my backyard tree today and they'll come down to look to see what snacks are out pretty soon. So, not always the same spot.

Alie: I mean, this is obviously a very basic question and quite ignorant, but how do they not fall out of the tree when they're asleep? They have such big round butts.

Suzanne: They do. Their butts look bigger than they are. When they're actually flattened down, their butts are not as big. [*Alie laughs*] I can tell you because I've measured many dead raccoons. So when they're dead, their butts are not that big. It's because they're hunched over when you see them, so their rears look giant, like woah. But they can actually squash, kind of flatten their spines down and that's how they get into such small spaces. So, you would look at a raccoon and say, well that is not getting into a 2-inch opening in my garage door. Oh yes, it is, because they are going to flatten themselves down and slide right through. So, they are a deceiving-looking species.

When they're in the crook of a tree, they hang. I don't know if you've ever seen red pandas, but red pandas do the same thing, they kind of hang on a tree. So, the bulk of their body is in the tree and then they can let their head and their feet go over. But they try to keep their heads down so that nobody can see them, and they just tuck it in their tail.

Alie: And now I'm looking out at my trees wondering which ones got raccoons in them!

Suzanne: Yeah, well more than you think! I've had a lot of people tell me, "Oh yeah, you can come and put your cameras in my backyard, but you won't find any raccoons." And then I show them the video the next day and they go, "Oh, I had no idea," because they're in all the trees. ["All right, just look. Look, look, look, look. Wall-to-wall raccoons."]

Alie: Well, that's how we confirmed that the latrine was a raccoon latrine. The first day that I surveyed the property, and I thought, "I've got to figure out which neighbor is pooping here and have a very awkward conversation." [Suzanne laughs] I was like, "but there's no toilet paper." Then I did some digging, on the internet, not in the dirt and realized that it's probably raccoons, so I put up a camera trap and sure enough, raccoons using it as a potty. But I understand there is a little bit of a risk in certain regions with roundworm parasites. So, what do you do if you find a raccoon latrine on your roof or in your yard?

Suzanne: Well, you should put on a mask, and luckily, we all have those now so that works out really well. I used to say that, and people would be like, "A mask? Where do I get a mask?" [Alie laughs] Well, I guarantee, not a problem. Put on a mask and some gloves, get yourself a shovel, scoop that up, dispose of it in a bag, throw it away in a sealed bag, and if you can, put some bleach on the area iust to kill whatever is left.

This is just something I've learned, and I told one of my good friends to do this and she was like, "This sounds unlikely, Suzanne." And I'm like, "No, try it." And she did. If you want them not to use the spot as a latrine, put some aluminum foil in that spot. They don't like aluminum foil. It sounds crazy but they really don't like the feel of it on their feet. So, she had one, a latrine on her roof, and she had to hang out the window and put the aluminum foil on her roof, but they never came back.

Alie: Really?

Suzanne: Mhm!

Alie: So, they do not want to have a disco space potty party?

Suzanne: They do not, no.

Aside: Just a quick roundworm aside because I know we all want one. Brain worm parasites, AKA, *Baylisascaris procyonis*, are tiny, little monsters and you must destroy them. There's this one CDC pamphlet that I read today; it earnestly recommended the kill it with fire technique. The pamphlet continued with this very breezy FAQ. It just said:

Should I flame the latrine site with a propane torch?

And then calmly answered:

Most chemicals don't kill roundworm eggs and are not suitable for outdoor use. Extreme heat will kill eggs instantly. Break up and turn over contaminated soil several times, flaming each time. Flame with a propane torch is effective but could cause a fire, burn injury, or surface damage.

And then it just says: Ask the fire department first.

Alie: Obviously they have likes, they have dislikes, they have a certain language of their own. So, when it comes to cognition, how smart are they?

Suzanne: Not as smart as people think they are. ["Ouch."] Honestly, I started studying raccoons because I thought they'd be like the monkeys of North America because I study a lot of primates and we don't have monkeys in North America. So, I thought, "Mmm, I wonder if raccoons fill that same niche and their little brains have developed to be like the monkeys of North America," because everyone is like, "Oh they're geniuses." The answer is no, they are not the monkeys of North America. They are clever, and endearing, and lovely, sometimes, but they are not the monkeys of North America.

They do have good memory but when it comes to... I'll give you an example. So, I work with monkeys in Kenya, they're called vervet monkeys, they're adorable little monkeys. Little vervet monkeys will watch you and know when you turn your back, they will steal your stuff, that's what they do. Raccoons, they may watch you, but they don't wait for you to turn your back to steal your stuff because they don't understand that. They just see a thing, want the thing, and get the thing. So, there's no plotting and scheming, it's just impulsivity and just going for it. And that's what raccoons do. It's a different kind of cognition, really, it's just to sort of destroy, break, grab, do whatever, fiddle with stuff until things break. That is what their go-to strategy is. So, they're not sitting and pondering and thinking about how doors work or any of that stuff. They're just like, "If I keep on pushing at it, it's going to open up," so that's what they do.

Alie: They're little chaos goblins.

Suzanne: They are, absolutely. That's why they do so much damage, because they're not sitting there thinking about the best way to get into your house. They're just like, "Oh, this looks loose, I think I'll just play with this for an hour." And then they rip your shingle off. So, that's the raccoon way.

Aside: So, if you're wondering whether raccoons are all gathered somewhere in an underground lair, plotting the destruction of order... Well, according to Suzanne, their cognition is such that they don't teach each other stuff, but they belong to the church of trial and error.

So, raccoons are called neophiles, meaning that they see something unfamiliar and they're down, they're just like, "I'm into it." They're the friend that makes you go on the roller coaster, the one that tries the new hot wings place even though its health code rating is a C. They're going to wear harem pants and a crop top before everyone else, and they'll look good. But they will also smash your belongings until they eat them. And they'll invade ecosystems and shake you down for hotdogs until you're bleeding.

And Jarrett made the point that given that they're endemic to North America, it's just a damn shame that the bald eagle is our national bird here in America instead of the raccoon. I mean, what's more American than a growing divide between rural and metro lifestyles, some destructive avers, and looking cute from afar, but being kind of a hellchild up close? But you still want to cuddle one. I get it; so do I.

But bad news, Suzanne says, in Canada, you can't legally have a captive raccoon. Although in the US, you can in certain states with a wild animal permit, or a wildlife rehab license. Arkansas, calm down, you can only own five at a time. And really, perhaps the question isn't *can* you cohabitate with a raccoon, but should you? Depends, do you like anarchy?

Alie: Now, what about folks in America who have domesticated them, or purchased a domesticated one, or raised an orphan? What is, for lack of a better term, an expert raccoonologist's opinion on that?

Suzanne: It's a bad idea, but I do know that people love their raccoons. People love baby raccoons and how could you not? Although they're bitey little things, I've got to say. They're super cute. But baby raccoons, within a few months, turn into adult raccoons who are super bitey, and super destructive, and not quite as cute as they used to be. So, you know, they're wild animals, they belong in the wild, not in your house, in my opinion. But if somebody already has one, I'm happy to... people send me photos and they're adorable and these are some very well-loved raccoons. But it's obviously not their natural habitat. So as a Canadian, I have to say, please leave the wild animals in the wild, but I know Americans have a different view.

Alie: Right. Although, we have so many wonderful dogs and cats that are just waiting to live in your house.

Suzanne: And need a home, yes.

Alie: Maybe if more dogs had mask markings, no one would want a raccoon.

Suzanne: Get a Sharpie, draw that on, whatever it takes. And I do understand if there's an orphan and you rescue it, and you raise it. But you know, release it. They can live in your backyard and come back... though you'll find that they won't.

Aside: Where will they go? Well according to Suzanne, world raccoon expert, they need their space, and not just from her. So, each raccoon has a home range of about 80 to 200 acres with dude raccoons strutting even further out. And obviously, like a city block or a rural road, the population density varies. But on average, every raccoon prefers to nap, and eat garbage and worms on its own, kind of, 10-acre estate. So, when it comes to your house, you're failing to impress a raccoon.

Suzanne: I don't get it because that's just not what we would do, but it's the same to me as seeing a tiger in a one-bedroom apartment in New York, which does happen too. Not a good idea. All the animals are very sweet when they're little, but they all grow up and that's a bad idea.

Alie: Can I ask you some questions from listeners who wrote in?

Suzanne: Sure!

Alie: So excited. Over 300 questions were submitted for you.

Suzanne: Oh, dear god in heaven!

Alie: I know, people are excited. Don't worry, we will not ask you all of them. Although, people would listen, people are so thrilled about raccoons. [both laugh]

Aside: I mean, you didn't think raccoons was going to be a single episode? Hell no. But before we even attempt to crack into questions, every week we scatter money like oily chicken bones on asphalt to a deserving cause. And this week, Dr. Suzanne MacDonald chose Toronto Wildlife Centre. And I could tell you what they do, but instead, like a creep, I went a found a published letter from 2019 in which Dr. MacDonald wrote:

Over the past ten years, it's been increasingly obvious that the work that the Toronto Wildlife Centre does to rescue, care, and treat injured, sick, and orphaned wildlife is an essential service for the area. I personally receive dozens of emails and calls from residents throughout the summer months, asking for help with injured or orphaned raccoons and I always send them to the TWC.

Nathalie Karvonen and the TWC do an extraordinary job of helping many thousands of animals and dealing with many thousands of residents. The numbers are staggering and only increasing as humans continue to encroach on wildlife habitat. We desperately need the TWC in this city.

So much applause and many kudos and donations went to them. More info is available at TorontoWildlifeCentre.com. And center is spelled "centre" because... Canada. So, that donation was made possible by sponsors of the show who you'll probably hear about now.

[Ad Break]

Okay, this first question comes via patrons Annika, Julie April, Ethan Bottone, Haley Squire, Jenna A, Austin Santiago, and Allison Hatz, as well as Elizabeth, age 8, sorry Lauren, for the swears in this, who needed to know about their bandit core aesthetic.

Alie: A lot of people wanted to know how their masked and striped markings evolved? Why are they wearing accessories?

Suzanne: Well, nobody really knows, so that's the answer. Whenever you ask a question about why do elephants have trunks? Why does any... We just do.

The function of it is disputed. Some people think it is a species identification tool so that raccoons can tell other raccoons by the way they look. Seems an odd location for that, in the mask on the face. But some people think because they work at night, it's kind of like, you know football players put black goop under their eyes to cut down reflection? Apparently... I'm not a big football player person. [*Alie laughs*] The idea is that does it as well so it will maximize the available light. Their vision isn't super great at night, so anything they can get to help them with that is good. So, it probably does serve that function, I don't know if that's why it evolved.

But there are raccoons without masks. So, it is a trait that varies across the subspecies of raccoons. The color of the raccoon does vary across North America and the darkness of the mask does vary as well. So, it does make sense that it would be a species identification thing in that case. You know, little female raccoon would say, "That one looks like me, really dark eyes," or "No mask at all." So, that's how it could evolve, for sure.

Alie: Aha! Okay, that's good to know. Listener Zoltan Szászi says: My question about trash pandas is, did they evolve to instinctively sniff out the best opportunities to do crime? Essentially, a ton of people use the term trash pandas, I'm curious how you feel about the term?

Aside: So yes, patrons who called them trash pandas looking at you RJ Doidge, Anna Duewiger, Joe Mueller, Josh Beatty, Caitlyn Shmaus, first-time question-asker Ashlee Dent, Spencer Hart, Sydni Bowers, Alec Grundman, Gary Jungling, Suzy Kroeger, Emilee Lance, Liz S, Jade Pollard, Joy Kidd, Margot Frayne, Paige McLachlan, Lizzy Martinez, Joy Kotheimer, and Dr. Teagan Wall who is so scared of raccoons she couldn't even submit a question. Don't worry I'm not going to call you out publicly though, oops!

Also, second part smell, first-time question-asker The Other Other Amy, Bobbi Minard, and yes, Zoltan Szászi who asked about sniffing out opportunities to do crime. And patron Rebecca Schon Kilde asked: Do they really gang up on people or did those seven raccoons just chase my cousin home because her waitress uniform smelled like pie? ... A lot to process here.

Alie: Do they have a nose for garbage?

Suzanne: [chuckles] Well, I actually think the term is really great and I use it too sometimes, although the pandas are so... You know, I'm a biologist so I'm like, "Well, they're not actually pandas." [both laugh] I'm always a little bit picky that way but it's a cute term so I have no problem with that.

They didn't evolve a nose for garbage, but they do have a good nose, just like your dog has a really good nose. Raccoon noses and dog noses are pretty darn good, just so happens to serve them really well in the city sniffing out garbage. It's not their nose so much as they can tell

there's food in a place – just like your dog and your cat can, just like we can to some extent – but raccoons have the added advantage of having those little hands so they can actually get into the garbage. Your dog can smell that there's something in the garbage can but can't get into the garage can, but the raccoons can.

Alie: And so, the raccoons aren't plotting, saying, "It looks like you have to twist it to the left before you lift it to the right." [Suzanne laughs] They're really just approaching it with fingers and chaos?

Suzanne: Yes, absolutely. "Let's see what we have to do." They bang on it, they knock it. Usually the go-to is knock it over, roll it around a bit. Yeah, I've gotten over 800 hours of video of raccoons attacking garbage cans and that's what they all do. There's no genius raccoon out there, they're all just bashing it and any raccoon that's been able to figure out these raccoon-resistant bins in Toronto has just broken into them. There have been viral videos showing raccoons opening the mechanism on these bins, but the mechanisms are broken so that's not really fair, is it? They break stuff, that's what they do.

Aside: So, let this be a lesson everyone. Just try and fail a bunch, until everyone assumes you're a genius. I gotta hand it to them, or do I have to paw it to them? Y'all wanted to know. In Abbey Jo's words: What's with the fingeys? And also of course, why do they wash things with them?

Suzanne: Actually, raccoons evolved, they're called a riverine species, so that means they evolved around rivers. They evolved to kind of catch their food at the edges of rivers and that's why they put food in the water all the time. Their Latin name is washing... actually, "washing rat." But "washing bear," lots of people call them that.

Their hands evolved in a very special way in that they have much more sensitive abilities to detect what an object is through their fingers, through their hands, than through their eyes. So, they see with their hands. They feel things and it translates into what the object is. It's very difficult for humans to imagine this. But if you think of dolphins using sonar [dolphin sonar signals] that's also difficult for us to imagine; they send out sonar and they get a picture of what's ahead of them. Raccoons use their hands, and they get a picture in their head of what they're feeling. They can do that underwater. So, if you give raccoons food, and there's water nearby, and the food is really hard, they often put it in the water. They will put everything in the water eventually, but they like searching for food in water.

I did a little test with a bunch of hotdog pieces and a bunch of rocks, they're all the same size, and just timed how long it would take them to pull the hotdogs from the rocks that are all submerged under water, it takes them like 5 seconds. They're super, super fast at that. If there was some sort of skill testing game that they could play to do that, they would win over every other species. They're really, really good at that.

So, they work at night, they need to rely on things other than super vision, and what they do is they rely on super sense of touch.

Alie: So, they're not washing as most of us grew up thinking?

Suzanne: No, they're not washing the thing. They may be softening the thing; it may make it more palatable. We've released racoons that were orphaned that were hand-reared and then released to the wild. I was lucky enough to go the day that we released them out and the first thing they do is they go down to a river, and they all put their hands in the water. [*Alie coos*] It's really amazing. These are raccoons that have never done that before ever and that's the first thing they all do. So, it is a very innate thing, an innate behavior that they do that. And they catch crayfish or

crawfish, I don't know how you say it, insects, fish, all sorts of things right by the edge of the water. In the wild, that's what they do.

In downtown Toronto, they go in our little backyard ponds, they go in our swimming pools, they go wherever they can find a source of water because that's what they are born to do.

Aside: Okay so, with around three-quarters of the sensory part of the brain dedicated to their tactile business, that is what raccoons are doing with their cute, soft, tiny, creepy, begging, adorable hands... which I'm really sorry to have to hand-deliver this news: they're actually paws. They're not even hands. Most folks who call the shots on these matters say you've got to have an opposable thumb to count as hands, our little garbage barkers don't. So, the next time you watch one abscond with half of your burrito, just check it out. You'll see that it's prayer hands emojing your lunch rather than gorilla-gripping it, if you will. So, there are your thumb answers Katie Winchester, Danae DeJournett, and Jessica Roth who had asked: Any hope of a texting raccoon one day? They don't need thumbs to text, I wouldn't put it past them. And they'll probably figure out TikTok before me.

But yes, raccoons evolved to live near water, just bellied up to the river buffet. Their ancestors and their pastoral relatives are just out there snacking on grubs and all kinds of aquatic critters, which is why when they go to dunk a cotton candy treat in water to figure out what the hell this pink cloud is, it causes them to have an existential breakdown, Leora and Emma Fitzpatric, who asked about those videos of mystified raccoons. I'm assuming you asked because it made a mark on my soul as well. Just the fear of hope, the mistrust of happiness, safety evaporated, slipping through our un-thumbs.

But let's talk about lies. So, patron Jessi asked: Is it true that they will eat slugs but first they roll them in the dirt to make them less slimy? Please, I'm dying to know if this is flimflam or not. Jessie, raccoons don't have time to meal prep. Never mind, it's actually true; I fact-checked it. Yes, yes. They use their non-hands to whip up dirt-encrusted slug cakes. But, I wonder, are they any good?

Alie: Christy Zimmer Coyle wrote in and said: My 5-year-old would like to know, what is a raccoon's favorite food? Do you have them fill out surveys? Menus?

Suzanne: No. But they do tell you by what they eat. I have tested a lot of foods. They do enjoy a nice cat food; I'll tell you that, they enjoy a nice can of wet cat food, they enjoy that very much. In fact, it's easier to say what they don't enjoy than they do enjoy. They do very much enjoy KFC, they do very much enjoy pizza, [Alie laughs] they pick the tomatoes and the onions off because they don't like onions. They do enjoy tacos; Indian food is a great favorite. They do enjoy sweets but not as much, they like nuts and things, it's like a Snickers bar over a Mars bar because the Snickers has the nuts. So, they will always go for the higher calorie. They very much enjoy McDonald's hamburgers; can't get enough of those. Anything that you would enjoy, they will enjoy as well. But onions, no. Not a big fan.

Alie: Oh! Good to know. Should anyone be feeding them or-

Suzanne: No.

Alie: No, that's generally a bad idea.

Suzanne: Bad idea, unless you want to have them come every night which is what mine are doing right now. ["Here! Oh my god they're ripping my coat and everything. Here. Talk about overwhelm of raccoons."] Yeah, you will have raccoons come every night and when you stop feeding them, they get quite angry about it. So, expect damage of your property because they will start trying to get

your attention by ripping weather stripping off. Whatever you got, they'll do some damage, so I would not recommend that at all.

Alie: Feisty!

Suzanne: In Toronto, when it's super, super cold the raccoons are... again, not hibernating but they're much less active. If they do come out and the winter is very, very long, I say to people, yeah sure put out some cat food for them, just to keep them from starving to death.

Alie: Helen Langille, first-time question-asker, said: A friend of mine told me that most raccoons are functionally bisexual. Is that true?

Suzanne: [laughs] How would that person know that? Oh my god, the questions I have. I just... I don't know. Functionally bisexual... No?

Alie: No? Okay.

Suzanne: No? Well, maybe they're watching different raccoons but no, I've not seen that. I'm not sure what behavior they're referring to. Males do wrestle; same sex, there's wrestling. But I think that's a bit of a projection to call that bisexuality. I'm not quite sure what they're referring to, but if they have video, I would love to see it.

Alie: Get in touch.

Aside: And by the by, I went down some real raccoon tubes looking for the literature on this and it's credited to the seminal, oh boy, 1999 Macmillan release, "Biological Exuberance: Animal Homosexuality and Natural Diversity," written by Canadian biologist, Bruce Bagemihl, who listed raccoons among wild animals who engage in non-heterosexual and nonreproductive physical, sexual affection, if you will. And this book is legit, it's often cited by anthropologists and biologists. And if you listened to the Neuroendocrinology episode on sex, gender, and biology with Dr. Daniel Pfau, this is a reference book that they often site. And the author, Bruce Bagemihl even is credited with helping reverse some homophobic sodomy laws in the US.

But culturally, in an extremely online way, I asked around about this connection between being bi and being a raccoon and it seems that the general consensus is kind of self-deprecatingly ironic, identifying with overlooked trash animals, who persevere despite being perceived as messy but also, hella cute. So, all those in favor say, "Bi."

Also, if you see any queer raccoons, get at Dr. MacDonald on Twitter at Twitter.com/YorkPsych. Her avatar is very easily recognizable; it's a photo of her head being scaled by a raccoon, which I assume she was okay with... unlike when they find her garbage.

Alie: Liz Davis and a bunch of other people want to know: How do we keep the little bandits out of the trash? Do you cover your trash in foil? What do you do?

Suzanne: Yeah, it's really hard. I keep mine in a locked garage and trust me, I have been through a lot of this, so I sympathize. I keep my bins in a locked garage, bungee cords, I use them. If they get into your garage though they'll figure it out eventually. But that's the only thing. We have to be smarter than they are, we just have to keep it out of their way. If you put them in the driveway at the curb, the raccoons will get into them. They have a lot of time on their hands. The urban raccoons are fat, and they have nothing else to do. [Alie laughs] I've seen a female spend all night trying to get into a trash can. She has nothing else to do. The ones in the wild are on the edge of starvation, they don't have time for this. But the ones in the city, they have all the time in the world, and they will work at it.

So, just keep your bins away from them and everything will be fine. I put my garbage bins out in the morning that the trash gets removed. I don't put them out the night before because I'm tired of picking up stuff off the street [both laugh] and all my neighbors are like, "Ha ha! They even hit you and you're the one who knows about them." I'm like, "Yeah, you may know but all you know is they're going to get into it if you leave it." It's like, it's an invitation to a buffet, why wouldn't they get into it?

Alie: It doesn't matter if you're Canada's queen of raccoons, you're still vulnerable.

Suzanne: [laughs] That's very sad. Yeah, everyone is vulnerable so just be smarter; use your giant cortex and keep your bins under lock and key until you have to put them out. If you just leave them there, you're just training them to get into them. So, the more time you give them to figure it out, the more they will figure it out, so don't make it easy for them.

Alie: Any representations of raccoons in books, in movies, in TV, *Guardians of the Galaxy*... anything that gets it right or really wrong?

Suzanne: Well actually, I thought *Guardians of the Galaxy* was fantastic. I love Rocket ["Question: What if I see something that I want to take, and it belongs to someone else?" "You will be arrested." "But what if I want it more than the person who has it?"] I was a little bit skeptical before I saw it, but he is 100% for himself. I know he has a group and all that, but he would leave his team members in a heartbeat if it was to save himself, that's absolutely true, raccoons would do that without hesitation.

It's the cartoons that makes them seem all cuddly and funny and whatever that, that's the reason that raccoons have been exported around the world, which is a very, very bad idea and now they are an invasive species in other countries because there have been cartoons that have shown that these raccoons are adorable and clearly not even an actual animal. So, people get them and go, "Oh, wait a minute, this thing bit me and is destroying my house and now I have to let it go outside."

Aside: So, people decide, "I'm just going to quietly release this hairy tornado, nothing to see here." And now those little robbers of hearts have made their way to Europe and Japan to eat slugs and look for sidewalk curry. And also, the males use their penis bones – that's right, Count Bacula strikes again – to get it on so loudly, and lady raccoons have sometimes up to five babies at a time. So many babies.

Suzanne: And then that's just a disaster. So, raccoons have the potential with climate change to actually take over much of the planet. They will eat every native species that exists; no one has defenses against them, and it is a very bad idea. So, I think those depictions of raccoons in cartoons as being super cute and lovely, may be cute for kids, but it gives people a wrong idea of what a raccoon is actually like. I always ask people, "Have you ever met one? [both laugh] Because if you think you want to go to a raccoon café," which have actually opened in South Korea, "then you've clearly never met a raccoon." Because that seems like a terrible idea to me. They're bitey, they scratch, I cannot imagine. Go to a cat café, cats are lovely.

Alie: [laughs] Can just imagine them strolling by and dipping someone else's croissant into your tea.

Suzanne: Absolutely, and then throwing it. Honestly, it's just... I don't... I like them very much, obviously, but I do not have misconceptions, and those misconceptions do come from those media depictions, to get back to your question. The cartoons are difficult. And there's all those videos on YouTube and TikTok of raccoons doing cute things, and they are indeed cute. But it's never really ending well for the raccoon. Some people are super devoted to their raccoon, and they do take a lot of time because they will be very destructive.

Alie: Is that your least favorite thing about being a raccoon studier, or a pyconologist... well, we'll figure that out in post. But I always ask this at the very end, what would you say is the worst thing about raccoons or the thing that is hardest about your job?

Suzanne: Oh, my job is not hard at all. Honestly, I get to study animals and it's fantastic, so there's nothing that's hard. Anything that's hard is because I've made a horrible mistake and... [Alie laughs] It is always my mistake, whether I'm working with elephants or raccoons or whatever it is, it's always something dumb that I've done. The animals themselves never are difficult, you just have to start to think like them, and appreciate what they do, and how they view the world, and so that's what I try to do. I always regret it when I don't do that, when I see them as a human, what a human would do, I misjudge that way. So, I would say they never do anything to make my job hard. I make my own job hard. [both laugh]

They're lovely, honestly, they're just a lovely little species, they're not trying to hurt anybody, they're just trying to get by, they're doing their job, they work at night, they're trying to be quiet, they're raccoons. We just have to learn a little bit more about how to work with them as opposed to against them.

Alie: What is your favorite thing about what you do or about raccoons?

Suzanne: Okay well, about raccoons, honestly, I just love watching them– I was just watching them last night, playing. It just pleases me so much to watch them play, even though they're on my deck playing in my patio furniture and ripping it to shreds. But still, they're so cute and they are just so in the moment, and they just have such fun until it all devolves, and they start screaming. But there is a moment there where it just is so wonderful and pure and lovely and that makes everything... that makes me happy.

Or watching them try to figure out a task, it really pleases me. In any species, I love watching animals try to figure something out and then achieving what they want. I just love that. I just love it when they get a thing that they've tried for, it pleases me. Humans too. So, I love that. It's a great privilege to be able to watch all these animals do their things and I can't imagine a better job.

Alie: How interesting too, to be an animal trying to figure out how animals are figuring things out. [laughs]

Suzanne: Yeah! And I always tell my students that. It's like, raccoons are not sitting around trying to figure out how we work. We're the only species that actually have a job devoted to figuring out how other species think and how they work. That is amazing! Human brains are amazing. Just think about it for a minute. Incredible.

But yes, other species, you know, they do watch us, and they do get our routines down. I kind of like that too, when I realize that they understand that if they come at 5 PM, I will be home and they can get some snacks. So, that pleases me too, that we kind of have a mutual understanding. That pleases me.

Alie: Thank you so much for disseminating such important and beloved raccoon information.

Suzanne: [laughs] It's my pleasure. And I will tell you, if you want to keep raccoons away, just cut an onion in half and rub it on whatever you don't want them to go near. [Alie laughs] It does work and it's cheap. They sell all these products on the internet but all I do is just use onions from the fridge and just put them on whatever. It does keep them away.

Alie: Hot tip! That's amazing.

So, there you go, ask crafty people, chaotic questions because now you know that you don't have to be perfect, or even the smartest. You just have to keep banging away at things and be hungry for discovery. Maybe there's a chicken on the other side. Also, raccoons are kind of a look but maybe don't touch kind of friend, just get a cat. And follow Dr. MacDonald MayorkPsyc on Twitter. Her website is linked on the show notes.

We're @Ologies on <u>Twitter</u> and <u>Instagram</u>, I'm <u>@AlieWard</u> on <u>both</u>. At TikTok, I'm <u>@Alie Ologies</u>, where I'm posting badly. And more links will be up at <u>AlieWard.com/Ologies/Procyonology</u> and another episode coming your way with more raccoon experts and their favorite things about raccoons, next week.

Thank you, Erin Talbert, who admins the *Ologies* Podcast <u>Facebook group</u>. Shannon and Boni for merch help. Transcripts are by Emily White of The Wordary, Caleb Patton bleeps episodes. Free transcripts and bleeped episodes are up at <u>AlieWard.com/Ologies/Extras</u>. Scheduling and business help by Noel Dilworth and Susan Hale. Zeke Rodrigues Thomas and Steven Ray Morris edit the *Smologies* episodes that come out every two weeks. Those are bite-sized and classroom safe. Jarrett Sleeper is the lead editor and is up at all hours helping me work on this. Currently, it's 3:04 in the morning. Nick Thorburn wrote and performed the theme music.

And if you listen to the end, you hear a secret. And this week the secret is: a big *Ologies* milestone is right around the corner and I'm not sure how to celebrate it. But next month, it looks like we are going to turn over the odometer to 69,420,666 listens. It's going to happen in January it looks like, so I don't know which one of you is going to be hitting play on that, but it's going to be special. Happy holidays! More raccoons next week! Okay, berbye.

Transcribed by Aveline Malek at TheWordary.com

Some links you might enjoy:

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A donation was made to the **Toronto Wildlife Centre**

Let's call it this?

Are we making racoons smarter? No, raccoons are.

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<u>Urban raccoons: very good at garbage</u>

21 minutes of a man feeding hot dogs to raccoons

Conrad the dead raccoon

Ummmmm, these raccoons need a heist movie

Raccoons are in the combination Pizza Hut and Taco Bell

How big is an acre?

Okay how big is a football field? I mean, a football pitch?

Biological Exuberance: Animal Homosexuality and Natural Diversity by Bruce Bagemihl

Can you have a raccoon? Should you have a raccoon?

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Ain't no potty like a raccoon potty

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The Somatosensory Thalamus of the Raccoon: Properties of Single Neurons Responsive to Light Mechanical Stimulation of the Forepaw

Raccoons get trapped in a trash can like a reverse clown car

Look look it's just wall to wall raccoons: James Blackwood loves raccoons

Raccoon Nation

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