Sidedoor (S10E07) – Welcome Back, Otters

Lizzie Peabody: This is Sidedoor, a podcast from the Smithsonian with support from PRX. I'm Lizzie Peabody.

Lizzie: Patty Storms and Morty Bachar are really proud of their backyard. There's a vegetable garden, shade trees, bushes for pollinators.

Patty Storms: *We also love to make sure that something is blooming at all times, and to create a lot of texture.*

Lizzie: I went to see their garden for myself on a rainy summer afternoon. We stood on their screened-in porch, looking out on the centerpiece of the yard: a jacuzzi-sized pond. There's a little rock waterfall and a stream.

Patty Storms: *We have birds bathing in the stream and, you know, the frogs and now the fish.*

Morty Bachar: *A snapping turtle.*

Lizzie: Their garden has won awards. It was featured on the 2021 Lewes, Delaware Garden Tour, a big deal in this little coastal community. And people who went on that tour got a chance to see Patty and Morty's prized fish—30 of them, including two large koi fish, both rescues.

Patty Storms: *We became very attached to the fish. And it sounds funny to some, I'm sure, but they have personalities. There were some that would come quicker or do funny things when we arrived, and so you really got to know them, and we felt that they were really part of the family.*

Lizzie: One morning, just like any other morning, Morty poured himself a cup of coffee, slid open the back door and walked into his garden. But as he gazed out onto his little backyard oasis he noticed something different. Something strange.

Morty Bachar: *I saw some colored objects, a few of them on the stepping stone and on the patio.*

Lizzie: As Morty got closer, he saw what these objects were.

Morty Bachar: *They were heads.*

Lizzie: *[gasps]*

Morty Bachar: *Big heads.*

Lizzie: Both koi fish heads and a dozen or so smaller fish pieces just lying there, evidently torn apart by something.

Morty Bachar: *I was devastated, you know? I love animals.*

Lizzie: What could have done this?

Morty Bachar: *It was at night, so I knew it was not blue heron. Fox don't do that. Raccoons don't like to get in the water. So I read everything about it, and I just was at a loss.*

Lizzie: Morty was determined to put an end to the fish massacre, so he put a big net over the pond, weighted it down on all sides with heavy rocks, and he set up motion-sensing cameras aimed at the water. Satisfied with his work, he dusted off his hands and went to sleep.

Morty Bachar: *So the next morning, the net was pulled aside and had a hole in one side and a bunch of heads. So now ...*

Patty Storms: *More fish heads.*

Morty Bachar: *More fish heads.*

Lizzie: By now, two thirds of the fish were gone—including their favorites. Morty and Patty needed eyes on a culprit. They pulled out the SD card, loaded it into the computer, and there on the screen ...

Patty Storms: *Nothing on the film.*

Morty Bachar: *Nothing on the film.*

Lizzie: *Really?*

Patty Storms: *No.*

Morty Bachar: *And the camera captured the whole thing, right?*

Patty Storms: *It was just darkness.*

Morty Bachar: *So I said whatever that is, it's very stealthy.*

Lizzie: What the heck was this thing? Or things? Patty and Morty were stumped, so they set up another camera that would take a snapshot every 20 seconds all night long. The next morning, they woke up ...

Morty Bachar: *The fish were gone. All the fish.*

Lizzie: *All of them?*

Morty Bachar: *All of them. One of them left.*

Lizzie: But this time, when they looked back at the previous night's footage ...

Patty Storms: *Black, sleek heads just popped up for a second and then was gone. And there was no doubt what it was.*

Lizzie: Staring back at them with its tiny eyes and a button nose was an otter. A North American river otter, to be precise. It must have made its way up from a nearby canal. Morty was furious, but Patty ...

Patty Storms: *One of my favorite animals has always been otters, so once Morty sort of overcame some of his sadness, I said to him, "We have an otter! How cool is that?"*

Lizzie: *[laughs]*

Lizzie: The North American river otter is making a comeback, popping its head up in areas where it hasn't been seen in decades. And receiving mixed fanfare.

Lizzie: This time on Sidedoor, we are hot on the trail of the river otter, one of the most elusive critters in the country. Why do we know so little about these animals, even though they play a major role in our waterway ecosystems? And we explore how these ferociously adorable predators might hold a key to understanding our impact on the environment. It's everything you 'otter' know about otters after the break.

Lizzie: There is nothing funny about river otter research.

Katrina Lohan: *Okay. I'm actually gonna have to walk around you 'cause I need a little bit more space to do this properly.*

Lizzie: *[laughs] Oh, you're gonna do the poop dance for us?*

Katrina Lohan: *Yeah.*

Lizzie: Okay, so there might be a few things funny about otter research. Like when the head of the Coastal Disease Ecology Lab at the Smithsonian Environmental Research Center showed us the otter's poop dance. It's something they do right before they mark their territory. And I have to say, Katrina Lohan really nailed the performance.

Katrina Lohan: *Okay, so imagine that my feet are down on four legs.*

Lizzie: Katrina stomps her back feet.

Katrina Lohan: *They kind of just, like, stomp, stomp, stomp, and there's a little wiggle and then they squat.*

Lizzie: *[laughs]*

Lizzie: It's like when you see a dog walk in a circle and you know it's about to lie down. This is like that, but it's sort of a pre-poop ritual.

Lizzie: *Do they make noises when they do the dance?*

Katrina Lohan: *So we occasionally hear them farting on the cameras, but we don't hear a specific vocalization, like, every time they perform the poop dance.*

Lizzie: *Okay. It's not a song and dance.*

Katrina Lohan: *It is not a song and dance. No, it's not like otter karaoke here.*

Lizzie: I'm at the Smithsonian Environmental Research Center—what we call SERC, for short. It's on the Rhode River right as it empties into the Chesapeake Bay about an hour outside DC. Now notably, the otters here at SERC are river otters, not to be confused with the infamously cute sea otters. You know, the ones you see all over stickers and notebooks, pillows. And they're usually doing something adorable like forming a heart with their bodies or floating on their back smiling, holding hands with their fluffy little faces. I mean, sea otters literally stop traffic with their cuteness in the film *Finding Dory*.

*[**ARCHIVE CLIP, Finding Dory:** Stop traffic! Cuddle Party! [cars screeching]]*

Lizzie: River otters on the other hand are known for—well, all I can say is that I will forever associate them with the poop dance, and now you probably will too. The fact is, river otters may not have much of a public reputation because they're incredibly hard to spot, despite the fact that historically, they've lived in nearly every body of water in America—including the Chesapeake Bay.

Lizzie: But otters either completely or nearly disappeared in about half of all states over the past two centuries, the result of humans encroaching on their habitat and hunting them for their pelts.

Alejandra Morales Picard: *But in conversations we've all had with people who have been in these areas for years or their entire lives, it seems pretty clear that we are seeing more activity throughout the Chesapeake Bay in these last years than we had in previous decades.*

Lizzie: This is Alejandra Morales Picard, a psychologist at Montgomery College who's working with Katrina to research otters in the Chesapeake Bay. She says it appears that otters aren't just popping up here, but in places all over the country.

Alejandra Morales Picard: *It's hard to know whether some of that is being driven by the fact that there's just more people in these coastal environments, and more people with cameras.*

Lizzie: It's hard to know for sure because ...

Alejandra Morales Picard: *To do observations on wild otters is—I don't wanna say impossible, but it is extremely difficult.*

Lizzie: That's because wild otters are nocturnal. They can live on land or in the water, and in both fresh or saltwater. I mean, Katrina Lohan studies otters for a living ...

Katrina Lohan: *And the only ones I have actually seen are the ones at the National Zoo.*

Lizzie: So how do you study wild otters without ever seeing them? Until a few years ago, researching otters at SERC would have been 'otter' the question—see what I did there?—because nobody knew there were otters around here at all. And then in 2018, one of Katrina's colleagues was walking along one of the boat docks, when she came across a strange-looking splatter. It looked like a massive bird poop full of sequins, and when she looked closer, she saw the sequins were actually fish scales.

Katrina Lohan: *I could see how you would not necessarily recognize their poop splats as being poop, because I think for a lot of us, we have an image of wildlife poop that kind of looks like fox*

or dog poop that has this, like, log-like shape, rather than this, like, weird splat that is what the river otters leave behind.

Lizzie: Looking closer at this "weird splat," Karen's coworker noticed something beside the fish scales and gunk.

Katrina Lohan: *She found these bright red worms in the poop.*

Lizzie: Parasites. And that is Katrina Lohan's jam. As a disease ecologist, she was very interested in the kinds of parasites otters might be carrying around, because those parasites could teach us more about the diseases living in our bays, rivers and other waterways.

Lizzie: Think about it: modern humans go to great lengths to separate our bathroom duties from the rest of our daily habits. We wash our hands, take showers. Our toilet has its own special room. We do all of this to prevent spreading germs and parasites. Otters? Well, they have a different style.

Katrina Lohan: *They like to have poop parties. They socialize and let themselves be known to other members of the population who live in the same area.*

Lizzie: Otters are like, "Hey, [sniffs] smells like Gabby's having a poop party. Maybe we should drop in." And the place where otters host these poop parties is called their "latrine," which is not just their bathroom/dancehall.

Katrina Lohan: *They will also eat at their latrines. They will also play in their latrines, and they will even mate in their latrines.*

Lizzie: *Why, why?*

Katrina Lohan: *This is a great question that I cannot answer for you.*

Lizzie: We don't know why otters choose to boogie, play, eat and mate in their latrines. But this makes otter latrines a treasure trove for Katrina's research. These little poop lovers are teeming with parasites, and their poop is like a shortcut for learning what sort of diseases might be in a specific area like the Chesapeake.

Katrina Lohan: *Because they can become infected with some of the same parasites as people, we can learn about what parasites are present in an area from the otters, rather than from having to survey the human population in that area.*

Lizzie: Once Katrina learned that otters were turning a Smithsonian dock into a latrine, she jumped 'otter' her seat to get studying them. A camera on the dock captured hours and hours of footage—otters eating fish, wrestling with each other.

Katrina Lohan: *What we call romping, which is them, like, playing with each other. It looks similar to how, like, dogs would play together.*

Lizzie: But the cameras also caught some surprising interactions between otters and other animals, like this one guest star ...

Alejandra Morales Picard: *So here we have an otter that pulls up what we believe to be a shad, which is a very large fish. And it is a very large fish.*

Lizzie: Alejandra Picard shows me the footage from one of these night cameras at SERC. The time code says it's a little before midnight. The otter's all alone on the dock, noshing on this fish.

Alejandra Morales Picard: *The otter basically has its grips on the fish as it's consuming it, and you can hear something in the background. And here comes the raccoon.*

Lizzie: *Oh! [laughs]*

Alejandra Morales Picard: *The raccoon approaches the otter so fast that the otter jumps into the water and the raccoon runs away with the fish. And he's like—the fish is so big he's, like, waddling away fast as he can.*

Lizzie: *[laughs] Trundling. Like, trundle, trundle, trundle.*

Lizzie: Otters versus raccoons! A rivalry on the docks! But Alejandra has another word for it ...

Alejandra Morales Picard: *Kleptoparasitism.*

Lizzie: *Kleptoparasitism?*

Alejandra Morales Picard: *Yes. It's thievery of—so one animal attains a prey item or, you know, source of food. And then another animal steals it.*

Lizzie: Yes, raccoons are known as nature's bandits, but this audacious thievery boggled Alejandra's mind. Otters are apex predators, top of the food web in the Chesapeake Bay. Raccoons are scavengers. And this was quite a risk for a meal. Take this second video Alejandra showed me where the otter arches his back, bares its teeth, and screams at the

raccoon.

*[**ARCHIVE CLIP:** Otter screaming]*

Lizzie: The raccoon turns tail and jets out of there as fast as it can—fishless. Which is exactly what I would have done. But there's one final video, and it's really special.

Alejandra Morales Picard: *This is everybody's favorite. It's fantastic. [laughs]*

Lizzie: There are two otters in this video. One is sitting right in front of the camera, chomping on a big fat fish. You can hear it crunching the fish bones.

Alejandra Morales Picard: *Seems perfectly content. The one in the background sees that raccoon coming. He's looking around the corner. He's like, "Hmm, something's going on." And he's gonna bolt, and there he goes right into the water as the raccoon is charging.*

Lizzie: *Here comes the raccoon!*

Lizzie: But the raccoon doesn't go for the fish. It runs to the back of the otter ...

Alejandra Morales Picard: *And deliberately, sort of intentionally seems to reach out that paw to grab the otter in the rear end, essentially.*

Lizzie: The raccoon spanks the otter!

Alejandra Morales Picard: *That causes the otter to spin around, obviously in surprise. If anybody comes behind you and grabs you on the rear end, you're gonna turn around, right?*

Lizzie: *Yeah, that would be surprising.*

Alejandra Morales Picard: *So he lets go of the fish as he spins around. And it all happens so rapidly.*

Lizzie: And the daring racoon dashes into the night fish in mouth. Alejandra was shocked. Was this raccoon just sitting at the end of the dock thinking, "Hmm, maybe tonight I'll try the spank and snatch maneuver?"

Alejandra Morales Picard: *I just kept thinking, like, is this intentional? Is this really intentional? I mean, it seems intentional.*

Lizzie: It's still unclear if this is an actual strategy by the raccoon, but these interactions can teach us a few things about the otters' role in the larger ecosystem because raccoons wouldn't normally be eating fish.

Alejandra Morales Picard: *Because naturally it doesn't seem likely anyway that these raccoons would have access to these massive shad fish if it wasn't for the activity of the otters bringing them onto the dock and actually consuming them there.*

Lizzie: These interactions are just one of many things Alejandra and Katrina are keeping an eye on as otters return to the area. But to better understand these elusive little creatures, they're studying another group of otters—the ones at Smithsonian's National Zoo. Still ahead, we see some otters up close and personal, and we try to figure out why everyone thinks otters are so cute and cuddly when they're clearly ferocious and unhygienic. We'll have more on that after the break.

***

Lizzie: Seeing an otter in the wild is rare. Like, really rare. But there's a place where you can see river otters practically any time of day—the Smithsonian's National Zoo.

Rebecca Sturniolo: *So they can be a little bit neophobic and scared of new things, so I'm gonna go in real quick by myself, get them in, and then I'll bring you guys in. Because if they see you with all the scary equipment, they might decide not to come inside.*

Lizzie: Rebecca Sturniolo is assistant curator of the American Trail at the zoo.

Rebecca Sturniolo: *Hey boys, you ready to come in? Hey, come on. Let's go!*

Lizzie: She let us crash an otter snack time to get to know the two otters that call the zoo home: Emmett, the dad, and Potomac, the son. And they are really fun to watch.

Lizzie: *I don't think I've ever seen an animal move quite like this. You know, they're very cat-like in their movements.*

Rebecca Sturniolo: *Yeah. Yeah, kind of slinky and ...*

Lizzie: *Yeah, they're very cat-like, except it's like a cat mixed with a seal.*

Rebecca Sturniolo: *Yeah. Yeah. Long bodies and those fluid movements.*

Lizzie: *And those tails. Yeah, their tails are so swishy, they move like they're always underwater.*

Lizzie: Like a cat mixed with a seal that runs like a bear—and a long swishy tail.

Rebecca Sturniolo: *This is Potomac here.*

Lizzie: *Oh my gosh! Look at his little teeth!*

Rebecca Sturniolo: *So you can hold the microphone up there and kind of hear him, like ...*

[otter eating]

Lizzie: That's the sound of Potomac chomping on a raw hunk of meat. Because zookeepers keep a well-documented log of what Emmett and Potomac are eating, that can serve as a control group for Katrina and Alejandra's research.

Rebecca Sturniolo: *And I can tell Katrina, "Hey, on Monday they had meat and crayfish, so their poops on Tuesday should reflect that."*

Lizzie: Yes, they're comparing wild and captive poop, but they're also using cameras to watch how Potomac and Emmettt spend their day.

Rebecca Sturniolo: *We have a captive audience of otters here, and we know that they're going to be active in the yard, so it's very easy for us to collect data on them because we can always see them, we always know exactly where they're going to be, and we have the ability to record them 24 hours a day if we want.*

Lizzie: Katrina and Alejandra are using this camera footage to learn about otter behavior, like where they prefer to make their latrines. Their outdoor yard has a little river sluice, a little wooded area and a pool where visitors can watch them swim and play.

Rebecca Sturniolo: *Our otters right now, their latrine site is in the pool, which makes more of a mess for us. Sometimes they'll have them over in that gravelly area, but they tend to always go in the same site for at least a week or two before they decide to do it someplace else.*

Lizzie: But we're hanging out with Emmett and Potomac in their indoor enclosure. It's where they come to escape bad weather or get a physical exam.

Rebecca Sturniolo: *Potomac, stand. Can you stand? Good.*

Lizzie: *Oh my gosh.*

Rebecca Sturniolo: *That's just his cutest behavior.*

[otter chirping]

Lizzie: And that chirping noise you hear in the background, that's Potomac.

Rebecca Sturniolo: *It kind of sounds like a bird chirping. I don't think you would expect that to come from this animal. It's like a squeak toy. [laughs]*

Lizzie: That's another reason why Katrina and Alejandra are observing Emmett and Potomac. There have hardly been any studies of wild river otter sounds, so there's still a lot to learn about the noises they make and what they could mean. Emmett, for example, makes a low grunting noise.

[otter grunting]

Lizzie: *Is that—is that sort of grunting and running around because, like, they're ready to go back in their enclosure?*

Rebecca Sturniolo: *Yeah, I think it's a happy sound.*

Lizzie: *Yeah?*

Rebecca Sturniolo: *Honestly. Yeah, I think they're kind of chatting to each other.*

Lizzie: I have to admit that after learning about otters fighting with raccoons, devouring an entire pond's worth of fish and holding poop parties, I kind of thought they seemed like viscous little monsters. But once you see them up close ...

Lizzie: *Like, what is it about them that makes them—I don't know, so cute?*

Rebecca Sturniolo: *Well, look at their adorable noses.*

Lizzie: *Oh!*

Rebecca Sturniolo: *They look like little stuffed animals.*

Lizzie: *They do!*

Rebecca Sturniolo: *You know, they kind of have, like, that large flat nose, tiny little eyes.*

Lizzie: *Mm-hmm. Their tiny little ears.*

Rebecca Sturniolo: *Yeah.*

Lizzie: *I was not prepared to be so charmed by these otters.*

Rebecca Sturniolo: *I think when you see them hunting their goldfish, you'll be reminded, "Oh yeah, they're predators," as they snag their goldfish and then bite their heads off.*

Lizzie: There's a famous line in *Jurassic Park*.

*[**ARCHIVE CLIP, Jurassic Park:** T-rex doesn't want to be fed, he wants to hunt.]*

Lizzie: Well, the same goes for otters. Rebecca picks up a pail of water. A half dozen fish the size of my hand are swimming around inside. She walks toward the edge of the pool in the otters' outdoor yard.

Rebecca Sturniolo: *So we'll bid them farewell. Thank you for your service, goldfish.*

[fish dropped into pool]

Rebecca Sturniolo: *They're like, "Whoa, this pool's so big! Hey, cool!"*

Lizzie: *[laughs] Yeah. They just got dumped into basically an ocean.*

Rebecca Sturniolo: *"We won the jackpot. Where do we go?"*

Lizzie: Then Rebecca releases the otters from their inside enclosure. Like heat-seeking missiles, they bolt into the yard.

Lizzie: *Here they come! Oh my gosh, he just slid into the water. Oh wow, they can just turn on a dime underwater. Look at him chasing the goldfish!*

Rebecca Sturniolo: *They're just little torpedoes that push off the side and just keep swimming. You can see the little white underbellies just kind of flashing through the water there.*

Lizzie: *Yeah.*

Rebecca Sturniolo: *Yeah. That countershading.*

Lizzie: *Yeah.*

Lizzie: You do feel kind of bad for the fish, but mesmerized at the otters' hunting skills.

Lizzie: *Oh my God, he's got two: one in his mouth and one in his hands!*

Rebecca Sturniolo: *Yeah, they'll hold one in their mouth, and then sometimes they'll get two or three in their hands, and they'll put them on the side of the pool and then feast.*

Lizzie: *Oh my gosh, he's got two in his mouth at once! Oh wow, they are really good at catching these fish.*

Rebecca Sturniolo: *He's like, "You just stay up there so I can eat you later."*

Lizzie: *Oh my gosh! Well, he's arranging his own little, like, meal buffet here on the edge of the pool.*

Lizzie: Emmett and Potomac have no idea they're giving researchers a unique window into the lifestyle of the elusive otter. But they're helping at a crucial time because a recent survey found that half of all states are reporting an increase in wild otter populations. It's still not clear what is driving the return of the river otters. Katrina says it could be a sign that steps we've taken to lessen our negative impact on the environment are working—things like reducing pollution runoff in waterways, or taking a more sustainable approach to fishing.

Katrina Lohan: *If they're in a certain area, there is a fish population large enough to sustain the number of river otters that are present there. So that's always a good sign.*

Lizzie: Katrina and Alejandra hope their research will show that the presence of otters can tell us about the health of a waterway. That otters can be used as a sentinel species.

Alejandra Morales Picard: *A species that essentially could—could warn us, or could be used as markers of the environment.*

Lizzie: Otters could be like canaries in the coal mine. But, you know, an otter in the water.

Katrina Lohan: *Seeing otters around where you live is a pretty good indication that things are healthy enough to support these animals, which then supports other wildlife.*

Lizzie: Back in Delaware, Patty Storms and Morty Bachar have accepted that otters come with the territory. They've even started restocking their pond with fish—snacks for their local neighborhood otters.

Lizzie: And Patty, who's an accomplished artist, even memorialized their backyard guests with a sketch.

Patty Storms: *I actually gave it to Morty on his birthday as almost an otter apology. You know, "Look at me, I'm so sorry."*

Morty Bachar: *"Yeah, but that's all I do. I eat fish. What do you want?"*

Lizzie: *[laughs] "What do you expect?"*

Lizzie: You've been listening to Sidedoor, a podcast from the Smithsonian with support from PRX.

Lizzie: To learn more about the Smithsonian's research with river otters, or to see some cute photos of Emmett and Potomac, check out our newsletter. You can subscribe at SI.edu/sidedoor. We might also include a video of Katrina doing that poop dance—just don't tell her. Promise that you will not tell her.

Lizzie: For help with this episode, we want to thank Katrina Lohan, Alejandra Morales Picard, Rebecca Sturniolo, Morty Bachar and Patty Storms. Special thanks to Emmett and Potomac for letting us crash their afternoon snack.

Lizzie: Our podcast is produced by James Morrison and me, Lizzie Peabody. Our associate producer is Nathalie Boyd. Executive producer is Ann Conanan. Our editorial team is Jess Sadeq and Sharon Bryant.

Lizzie: Tami O'Neill writes our newsletter. Episode artwork is by Dave Leonard. Extra support comes from PRX. Our show is mixed by Tarek Fouda. Our theme song and episode music are by Breakmaster Cylinder.

Lizzie: It is now possible to give us direct feedback on any Sidedoor episode using the Spotify app. Let us know what you think of the show, or just give us your best otter pun. I bet they'll be 'otter' this world!

Lizzie: If you have a pitch for us, send us an email at sidedoor (@) si.edu. And if you want to sponsor our show, please email sponsorship (@) prx.org.

Lizzie: I'm your host, Lizzie Peabody. Thanks for listening.

Katrina Lohan: *My girls have so many stickers of otters, like, holding a heart or forming a heart with their little bodies. Certainly they don't have stickers of them ripping fish heads off and rolling around in poop.*

Lizzie: *[laughs]*

Katrina Lohan: *Although maybe they would like that. I don't know. They probably would think it was funny.*

Lizzie: *Those stickers didn't make it through the publishing process.*

Katrina Lohan: *No. No, no, no.*

-30-