

Episode 3: Coquerel's sifaka

Hi, Megan here! I'm going to be taking you into one of our Natural Habitat Enclosures to meet our Coquerel's sifaka. This is a very special experience because we're going to see the lemurs surrounded by forest habitat, but it means I am going into the lemurs' homes and their spaces, so I am wearing an outfit that stays here at the Lemur Center: All these clothes get washed here, and these shoes stay here. That way, I make sure that I don't bring anything in from the outside world and that I am not taking anything home from the lemurs' habitat. And to be extra cautious, to keep myself and the lemurs safe, I am also going to be wearing this mask while I talk to you about them.

Hi from Natural Habitat Enclosure #1! Now, we have them numbered because we have nine different Natural Habitat Enclosures here at the Duke Lemur Center. And one of the biggest questions we get is, how do we keep the lemurs where they are supposed to be if we have this nice big forest area for them to play and jump in? How do we make sure they are not leaving that forest and going and exploring the rest of the Duke forest around us?

Well, we have a very special way to make sure that our lemurs aren't able to get out, and it's based on science. We know how lemurs move, so we can use that to our advantage. Right next to me is our fenceline, and you can see that at the top of the fenceline, we have a net that runs across the top. That net has a light electrical pulse that runs every so often. It is not enough to cause any severe harm or anything, but it does feel a little weird. So when the lemurs touch it they know "Oof, oh, I don't want to go that way!" And then they'll come back down and go back to the forest.

The other precaution that we take is, you can see there is a large section of grass that I am standing on right here. We always make sure we have about 10 to 15 feet of open grassy area between the fenceline and the nearby trees (or bamboo, as we have right here). That way, we know that the lemurs have enough distance between the bamboo and the fence that they are not going to be leaping over to anything else on the other side. And we have an equal amount of space on the other side of the fence, so there's no trees for about 20 to 30 feet on either side of this fence. So that's how we keep them in!

Alright, so here I have some of our lemurs who live in Natural Habitat Enclosure #1, including a very curious Pompeiia. Now, it's very easy to tell Pompeiia apart from her daughter Francesca, because Pompeiia here has a black radio collar on and Francesca over here has a pink radio collar on. So, this is mom and this is daughter.

Those collars are not for everyday use, but sometimes when we come out here and we bring their food and we shake their bucket or make whatever noise it is they associate with breakfast, sometimes they don't come down. Usually it's on a really rainy morning when they say, "You know what? I'm tucked up in a tree and I am really comfy and warm snuggled up with my troop. I don't want to come down for breakfast right now." On those days we still need to check on them, make sure everybody is feeling okay. But even in our Natural Habitat Enclosure #1—which is only about 1.5 acres in size—that's a lot of woods to check for lemurs, especially on a rainy day. So what we do is, we have equipment that we use to track the radio signal of each collar. We can actually track either Francesca or for Pompeiia if we are missing one of them. We can find where we should look up in those trees. That way, we at least have a smaller area to look up and find them. And then we can see they are all snuggled in safe and sound, just staying nice and dry and warm if it's a rainy morning or something like that.

Coquerel's sifaka are an amazing species of lemur. All lemurs are pretty remarkable, but these guys are pretty unique. As you can see, they are moving around, bouncing on their hind legs. Even sitting behind



me they're sitting—squatting down—on their hind legs, not moving around on all fours. So, these guys are **bipedal**, meaning they are two-footed, like us—like humans! But they move a little differently than humans. You can see that they actually have their hips rotated out constantly, so as Francesca bounces around, she is bouncing around with her hips open wide. And she is kind of hopping around instead of walking with one foot in front of the other. It's for this unique locomotive pattern that these guys are called the “dancing” lemur. And you can see that they are very graceful as they move around.

Coquerel's sifaka are also incredibly unique in their digestive habits and their eating habits. They live in the northwestern deciduous forests of Madagascar, and their diet mostly consists of leaves. They also like to eat twigs and bark, and they might even come down to the ground and eat dirt sometimes for some nutrients they can get there.

In addition to their super unique locomotive pattern as they're doing that vertical leaping and clinging through the forest, these lemurs have some amazing adaptations in their hands and feet. All lemurs have grasping hands so they can grab and hold on to things really well, but Coquerel's sifaka have particularly long fingers. If you can see her feet, those are really, really long toes and she actually has little circular ends on her fingertips, kind of like a gecko—so that's something that helps them grab and hold on when they are moving through the trees. She also has incredibly long thumbs on her back feet. We'll show you a close-up so you can see. She's got this really long thumb that wraps all the way around, which allows her to grab and really securely hold on. Especially with this bamboo, it's the perfect width for her to grab and jump and keep herself really stable.

As you can see, Francesca behind me is nibbling on some of the leaves that are in her forested habitat—and you might get photobombed, because we have a very curious mongoose lemur who's near our camerawoman right now! So Nacho might be coming into frame... There's his nose! Nacho and Francesca can actually snack on all of the food you can see around you in the forest. They know what's good for them, and they know what's not. They have those natural instincts, but Francesca is going to prefer all the fresh new leaves in the spring, the new flowers. Things like redbud or muscadine grapevine that grow around here naturally.

Francesca here is actually a very special lemur. You guys may or may not have heard of the show *Zoboomafoo*. Now if you're like me, you grew up watching this show. It was hosted by Chris and Martin Kratt but they also had a co-host! It was a live lemur in the opening shots named Zoboo on the show, but we [at the Duke Lemur Center] knew him as Jovian. Jovian was a very special guy who lived here for many, many years and Francesca is actually his granddaughter.

As you can see, Francesca is very comfortable with me standing here, with our camera being right here. That's because she is very used to people being around her space. But when it comes to the *lemurs* who get along out in the forest, that's a more complicated decision. We have room for about a third of our 200 lemurs to come out into these forested habitats and free-range. We have nine different forested habitats and we can have anywhere from two to four different species in the same enclosure, depending on how much space there is and how well everybody gets along. And those lemur troops can be anywhere from two to five or six different lemurs of each species living in that forest.

We also have to make sure that they're comfortable with people. We can't have lemurs who get grumpy around people or get too nervous around people, because we come out here and obviously there's no barrier between us—we have to know that we're going to be able to trust them to behave themselves around the people out here.

All lemurs who live out here also have to follow very special training protocols that we have. Every forest has a specific auditory cue. That means a sound that we make that means “Hey, its breakfast time!” Whether they are hanging out in their attached building or out here in the forest, when they hear that sound they know “It's breakfast time. I should come to breakfast!” That sound out here is actually the



sound of two whistles. It's a two-toned whistle and everybody knows when they hear that sound, "Alright, it's time to come to breakfast, we better show up." They get their breakfast, we see how they're doing, we see that everybody is doing okay. And then they can go back out into the forest for the entire day and night, 24 hours a day as long as it's warm enough.

All the summer months, these guys get to go free-range out in their forest habitats for as long as they want. But in the winter, when it starts getting a little bit colder at night, we do have to start keeping them in from the forest regularly. These guys are tropical animals: They are not used to cold weather. As soon as it drops below 41 degrees, everyone gets locked inside where they stay nice and safe. That way we don't have to worry about anyone getting frost-bitten tails or toes.

Coquerel's sifaka like Pompeiia and Francesca are considered Endangered in the wild. [2020 update: Coquerel's sifaka are now classified as Critically Endangered.] Like all of the other lemur species, these guys are definitely threatened by habitat loss and deforestation.

One of the ways you can help lemurs like them is by helping support the work we do here at the Duke Lemur Center. Pompeiia is actually one of our adoptable lemurs. Now, of course that doesn't mean you can bring Pompeiia home! As we hope you know by now, lemurs do *not* make good pets [lemur.duke.edu/not-a-pet]. But you can symbolically adopt her and support what we do here. And you can learn about all the fun antics that Pompeiia and Francesca are getting up to. Once you adopt, you can do it at various levels, and you'll get lots of updates throughout the year on how your lemurs are doing and what's going on here at the Duke Lemur Center. So, it's a great way to stay in touch and it's a great way to help support us. It even makes a great Christmas or birthday gift! [Learn more at lemur.duke.edu/adopt.]

