

# Episode 3: Animal Housing

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**Megan:** Here at the Duke Lemur Center, our lemurs have lots of different housing options depending on the weather, their social dynamics, and each animal's individual needs. We'll be meeting lemurs in all different housing arrangements today, so we thought we'd show you around!

In warm weather, many lemurs get to free-range in multi-acre forested areas called Natural Habitat Enclosures, or NHEs.

**Alanna:** Some lemurs get to spend the summer on the tour path in our summer silos. When you visit the Duke Lemur Center in the summer months, these are the animals you usually get to meet!

**Anna:** In the winter, lemurs need a warm place to get away from the cold. Our indoor-outdoor housing is designed to optimize lemur play and privacy, while giving them a place to get out of the cold or the heat.

**Faye:** And finally, our nocturnal species have special housing to adjust to their nighttime activity patterns. All of these housing options help meet the lemurs' individual needs, and ensure that they are getting the best possible care.

**Megan:** Hi from Natural Habitat Enclosure #1! Now, we have the NHEs 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 forested 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?

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.

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 – 15 feet of open grassy area between the fence line 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.

We call the lemurs who live in our Natural Habitat Enclosures “free-rangers,” since they can move freely in their large forested space. Since free-ranging lemurs have so much freedom to move around large areas, we have to make sure we can find them and check in to make sure they’re all healthy and happy every day.

So, there are three important requirements to become a free-ranger: 1) lemurs have to respond to their training cues really well, and come to their feeding site every morning for breakfast; 2) lemurs have to play nice with other lemurs and keep a healthy distance from the humans in their enclosure; and 3) lemurs have to be in good physical health for climbing and jumping around in the tall trees.







You may notice that many free-ranging lemurs wear collars. These collars can help our staff and researchers tell lemurs apart from one another, but more importantly, they emit a radio signal that helps us find a lemur if he or she doesn't show up for breakfast. Usually, lemurs only miss breakfast if they're sleeping high in a tree, tucked in a nice warm huddle with the rest of their troop on a rainy morning.

The lemurs are able to free-range all day and night as long as the temperatures are warm enough. Because lemurs come from Madagascar, most of them aren't comfortable in temperatures below 41 degrees. Once the weather gets cold, all of the free-rangers come inside to stay warm!

**Alanna:** Lemurs that aren't free-ranging in the summer might get to hang out in our summer silos on the tour path. These silos offer lots of vertical space for the lemurs to climb and plenty of stimulation from the forested area around them. When visitors come on a public tour, these are the lemurs they get to meet, so we always make sure that the lemurs living in the silos are comfortable seeing lots of guests on a daily basis. If we see any sign that the lemurs aren't happy with their public-facing setup, we can relocate them to a more private housing area.

The lemurs always get to choose if they want to come up front, hang out in their back area, or nap in one of their insulated nest boxes. These nest boxes keep them warm on chilly nights. On hot days, we turn on fans to give the lemurs more airflow and help them stay cool. Once the weather gets too cold for the lemurs to live outside full-time, they will also move indoors for the winter season.

**Anna:** The lemurs at the DLC have a pretty nice apartment setup that allows them year-round access







to indoor space. The indoor-outdoor housing is designed to allow the lemurs to move naturally through the different “rooms” of their area, while having the ability to get some privacy from visitors or their own lemur roommates. Because our lemurs move around so much, these housing structures are adjustable, so we can provide more or less space depending on the size of the social group currently living there. We can also separate individual lemurs as needed for training, non-invasive research, or just to give them a chance to finish their breakfast without someone trying to steal it!

Lemurs spend the winter in these heated areas, but they can also access them in the summer from their forested areas if they get too hot or just want a more sheltered area to hang out in. Some lemurs spend all year in these indoor-outdoor areas, like our older lemurs that might need more controlled temperatures or other accommodations.

Throughout the year, these housing spaces are set up with plenty of structural enrichment to maximize the lemurs’ physical and mental health. Keepers swap out enrichment items regularly so the lemurs always have something new and fun to keep them occupied.

**Faye:** Hey, who turned out the lights? If you get a chance to visit the nocturnal building on a tour of the Duke Lemur Center, you’ll experience what it’s like to be a nocturnal lemur!

Because these animals are active in the dark, their housing is set up with a reversed light cycle, allowing both keepers and visitors to observe them while they’re awake. Once the sun goes down outside, the lights will come on in the nocturnal building, and everyone will go into their nest areas to sleep away the “day”.







In order to make sure they can see the animals clearly and complete their work, the keepers utilize red light in the nocturnal areas, which is the least invasive color for nocturnal lemurs as they can't see red. (We've color-corrected these videos for easier viewing, but here is what it looks like normally!).

Nocturnal lemurs and bush babies have a special adaptation in their eye in order to see better in the dark. This is called a **tapetum lucidum**, but is also referred to as "eye shine" since you can see the reflection of this special layer of tissue in the animal's eye if you shine light on it. The tapetum lucidum enhances sensitivity to light, allowing these creatures to see well in the dark.

Most of our nocturnal animals at the DLC are extremely small, so they are not able to safely free-range in the forest. Our keepers do a great job of bringing the forest inside to them instead!

**Megan:** Now that we've had a chance to show you around, we'll see what all of the lemurs are up to!

