Episode 14: Fat-tailed Dwarf Lemurs

Megan: "Fat-tailed dwarf lemur" may seem like a mean nickname, but it's actually a great description for this small nocturnal lemur species! There are many different species of dwarf lemurs living in Madagascar, but we only have fat-tailed dwarf lemurs living here at the Duke Lemur Center.

Fat-tailed dwarf lemurs are found on the western coast of Madagascar in dry, deciduous forests. All members of the dwarf lemur family have one incredibly unique thing in common that sets them apart from any other primates: they are all obligate hibernators, so they spend up to eight months of the year hibernating.

Preparing to hibernate requires storing a lot of energy, and while other mammals like bears will store that energy in fat all over the bodies, fat-tailed dwarf lemurs store most of that energy in—you guessed it—their tails! During the wet season, when food is plentiful in their deciduous forest home,

fat-tailed dwarf lemurs will eat plenty of high-energy foods like fruits, tree gums, flowers, nuts, and insects. At the end of the wet season, they can end up with 40% of their entire body weight just in their tails.

When the dry season comes, fat-tailed dwarf lemurs will hibernate inside a cozy tree hole. Other species of dwarf lemur living in different habitats in Madagascar have been found hibernating underground. Long periods of hibernation consist of smaller bouts of torpor for 12-14 days, punctuated by short periods of arousal. These moments of arousal are not filled with loads of activity; instead, they're just brief stretches of time when the dwarf lemur's body arouses just enough to perform important functions like sleep, which don't happen during torpor.

When dwarf lemurs are in torpor, their resting heartrate goes from over 300 beats per minute, down to just eight to 10 beats per minute; and their body temperature drops to just a few degrees above the ambient temperature around them.

By studying the dwarf lemurs living here at the Lemur Center and collaborating with Malagasy scientists to study dwarf lemurs in their native habitats in Madagascar, our researchers can get a more complete picture of this incredibly unique process in these tiny primates. Because we share an immense amount of our genetic code with all primates, including lemurs, it's possible that one day advancements in human medicine or even distant space travel might be possible because of these incredible little lemurs.