

Pet trade may pose threat to bushbaby conservation

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Southern lesser galago, or bushbaby. Credit: CC photo via Wikimedia Commons

Southern lesser galagos (*Galago moholi*), a species of primate that lives in southern Africa, boast big, round eyes and are so small they can fit in your hand.

A new study from an international team of scientists, however, suggests that there may be a downside to their cuteness: The trade in lesser galagos, also known as bushbabies, which some people keep as pets, may have shifted the genetics within their wild populations over the span of decades, according to the research. Those changes could undercut the ability of the critters to adapt as human farms and cities grow throughout the region.

The study was published recently in the journal *Primates* and was led by researchers from the United States and South Africa, including primatologist Michelle Sauter at the University of Colorado Boulder.

Lesser galagos, she said, are hard to spot: They're nocturnal and live high in the branches of acacia trees. But you may still hear their eerie calls at night in the savannas and forests of South Africa, Botswana, Zimbabwe and other neighboring nations.

"They're called bushbabies because they sound like a baby crying," said Sauter, professor in the Department of Anthropology. "It's kind of spooky."

In their new study, Sauter and her colleagues analyzed the DNA of bushbabies living in the regions around Pretoria and Johannesburg, South Africa, and more remote areas to the north. The team found that populations located far away from each other may share more genes in common than scientists would normally expect—suggesting that something, and probably people, is secretly shuttling the primates around the country.

"You've got populations that are genetically different mixing with each other," said Metlholo Andries Phukuntsi, lead author of the new study and a graduate student at the South African National Biodiversity Institute and the Tshwane University of Technology in Pretoria. "When

that happens, you can dilute the local gene pool, and these animals lose their ability to adapt to their habitats."

Bounding bushbabies

Study coauthor Frank Cuzzo said that the findings are significant because scientists today don't know much about these primates, which are cousins to lemurs. But they're worth keeping an eye on, including for their feats of acrobatics.

"From a simple sitting position, they can jump a meter (three feet) into the air, grab a moth and bring it back down," said Cuzzo, a CU Boulder alumnus and primatologist at the Lajuma Research Centre in South Africa.

Those majestic leaps, however, may be growing rarer in parts of South Africa. The country's Limpopo and Gauteng provinces have experienced rapid urbanization in recent decades. In 1980, for example, the Pretoria metropolitan area had an estimated population of about 700,000 people. Today, more than 2.5 million people call the city home.

Sauter suspects that this expansion could be pushing bushbabies out of many areas—and all without anyone knowing.

"What's is worrying is that we talk to farmers, and they're saying, 'We used to see bushbabies back in that orchard, but we don't anymore,'" Sauter said. "That's true even in places like national parks. Some bad things may be happening to them, and it's flying under the radar."

She and her colleagues wanted to find out if southern lesser galagos really are in trouble. To do that, the researchers worked closely with veterinarians to safely collect [blood samples](#) from primates living in several different habitats in Limpopo and Gauteng provinces. They then

analyzed those samples, plus others kept in biological archives, to take a close look at their mitochondrial DNA—small clusters of genes that mothers pass to their offspring.

Bushbabies on the move

And, as Sauter put it, "something weird is going on."

Phukuntsi explained that, normally, scientists expect that animals that live closer to each other should have more in common genetically than those that live far apart—when [wild populations](#) are separated by large distances or barriers like mountains, fewer individuals can travel between them to breed. But what the team discovered in its samples from roughly 40 bushbabies was almost the opposite: Individuals from areas separated by dozens or even more than 200 miles shared a lot of gene mutations. Individuals dwelling within the same populations, in contrast, displayed a surprising amount of genetic divergence.

Something, in other words, seems to be putting the species through the genetic equivalent of a cocktail shaker. And all signs point to the trade in wild animals.

"We think that maybe people are catching them and bringing them to a different area," Phukuntsi said. "But then they become difficult to maintain as pets, so people release them back into the wild."

He added that wild animals have spent thousands of years adapting to the challenges of their particular habitats. If you mix genes up too much, you risk washing away all of those helpful adaptations.

"You can really tell whether a population is healthy or not by looking at its genetic diversity," Phukuntsi said.

For now, the findings suggest that researchers may want to take a closer look at the conservation of these miniature primates. And if you're thinking about keeping a bushbaby in your home: don't, Phukuntsi said. They may be cute, but like all wild primates, they're not well-behaved and don't make good pets.

More information: Metlholo A. Phukuntsi et al, Population and genetic structure of a male-dispersing strepsirrhine, *Galago moholi* (Primates, Galagidae), from northern South Africa, inferred from mitochondrial DNA, *Primates* (2021). [DOI: 10.1007/s10329-021-00912-y](https://doi.org/10.1007/s10329-021-00912-y)

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