



Where I work Kerrie Mengersen

Photographed by
Vanessa Hunter.

As part of my work as a statistician, I research virtual habitats, including models of areas likely to be inhabited by jaguars. Here, I'm on Lake Imiria in Peru, in a wooden canoe made by Indigenous Shipibo villagers. Our team went out early in the morning to spot jaguar prey such as capybaras, peccaries and turtles, and to search for jaguars – or at least try to detect their calls or footprints.

It looked so serene with the huge trees and calm water, but the air was a cacophony of bird calls and mosquitoes – and was sometimes punctuated by shouts from team members when they glimpsed a sloth or a caiman. Boats are the best way to get around because the forest is very hot, very dense and potentially dangerous.

Because jaguars are rare and elusive, there are very few recorded observations of them. So my team at Queensland University of Technology in Brisbane, Australia, uses virtual reality (VR) to help understand them. We take photographs of selected sites that jaguars might inhabit and turn these photos into VR scenes. Then, instead of taking jaguar experts

to the jungle, we take the jungle to the experts. These are a mix of local Indigenous people, applying their knowledge of the region, and international experts. We immerse these specialists in different locations in our virtual jungle and ask them: "How likely is a jaguar to live, move through or hunt in this area?"

This immersive environment helps people to recall and identify important details that we need to build our statistical models.

These predict where jaguars are most likely to roam, and are being used to guide conservationists in Peru who are building a corridor between protected areas.

For example, when the local people used our VR headset, they told us about the importance of specific fruit trees that the jaguars' prey rely on. I think of this human knowledge as data that are hiding in these experts' brains. The only way to tap those data is to put the experts right there, in the jungle scene.

Kerrie Mengersen is a statistician at Queensland University of Technology in Brisbane. **Interview by Kendall Powell.**

Correction**Homing in on the jaguar**

This article incorrectly located Kerrie Mengersen's team at Queensland University. It is, in fact, at the Queensland University of Technology.

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