



Where I work James Ball

Photographed by
Tom Hattermann.

The Amazon rainforest of French Guiana constantly buzzes and hums, but I keep my focus on the trees. In this picture, taken in November 2020 – the most recent time I was there – I’m walking through a dense forest at the Paracou research station near the coastal town of Kourou. I’m looking at drone pictures of the canopy and working out how each trunk fits into the puzzle. It sounds easy, but the forest is extremely complicated. Even with binoculars and close attention to detail, it’s hard to work out which trunk connects to a particular patch of green when you’re looking at it from an aerial view.

My project is part of a bigger effort to understand the forest’s productivity and rhythms. Of the 750 or so woody tree species in the area, many are deciduous. But unlike trees in temperate climes, which shed leaves in autumn, these follow their own schedules. With drones and LIDAR – a mapping system that uses ultraviolet lasers – we can track the trees at a much larger scale than we ever could before. Observations from the ground help to fill out the picture.

The Amazon rainforest, the largest and most biodiverse forest in the world, stores a huge amount of carbon. The great fear is that climate change could transform Amazonia into a drier, savanna-like ecosystem, which could release incredible amounts of carbon into the atmosphere. Understanding the forest’s carbon flows can help us to predict how the whole system will respond to climate change.

As you walk through the forest, there’s a constant chorus of birds, with squawking parrots and hummingbirds that violently zoom around like a golden snitch, a fast ball in quidditch, a sport in the Harry Potter series. I cover myself in the insect repellent DEET to ward off mosquitos, but a few ticks still crawl on me. I sweat constantly in the heat and humidity, and my clothes never fully dry. At night, I sleep in a hammock under a tin roof that pings in the rain.

I can’t wait to go back.

James Ball is a PhD student in ecology at the University of Cambridge, UK. **Interview by Chris Woolston.**