



Where I work Shannon Olsson

Photographed for *Nature* by
Sayan Hazra.

John Muir, the nineteenth-century naturalist, once wrote that a “multitude of animal people, intimately related to us, but of whose lives we know almost nothing, are as busy about their own affairs as we are about ours”. As a chemical ecologist, I study those ‘animal people’.

In this photo, I’m helping my PhD student Aditi Mishra to plant 3D-printed, fake flowers that she designed for a long-term study. The idea is to understand how pollinating insects identify and respond to flowers in different environments and climates. We coat the plastic flowers with a paint that reflects a specific wavelength, and smear them with chemicals that attract pollinators. Then we count how many insects visit them.

We’ve planted these flowers at various altitudes in the Himalayas, in Sweden and here, near Bengaluru, India. As the planet changes, we expect pollinators’ behaviour to change. Humans are altering the environment in a myriad ways: pollution, agrochemicals, land use and invasive

organisms are all changing the way our planet’s species interact.

This is one experiment, but my lab of five – all women, for the first time in my career – is involved in many more that look at insect behaviours. Just out of the shot is our rolling lab, a rented jeep that we’ve decked out with delicate, specialist scientific equipment to measure the physiological activity of the pollinators, down to the rate of their heartbeats: a honeybee’s heart beats around 300 times a minute.

India has astonishing biodiversity: it has around 17% of the world’s biodiversity hotspots. But it also has 17% of its humans, making it a vast intersection of nature and industry. It’s that crossover between ‘human people’ and ‘animal people’ that brought me here from the United States.

As big a city as Bengaluru is, my heart is in nature. I love spending my time here, in Nandi Hills, planting printed flowers.

Shannon Olsson is a chemical ecologist at the Tata Institute of Fundamental Research in Bengaluru, India. **Interview by Jack Leeming.**

Correction

This Where I work article misspelt the name of Shannon Olsson's institution. She is at the Tata Institute of Fundamental Research, not the Tartar Institute of Fundamental Research.