

A city without trees is like a bird without feathers...

The first part is from Chapter 8 (entitled “Urban environments”) of my book *Pollinators & Pollination: Nature and Society* (Pelagic Publishing, 2021)

The second part is from my forthcoming book *Birds & Flowers: An Intimate 50 Million Year Relationship* (Pelagic Publishing, 2024), which should be available by the end of the year.

Part 1

When we think of ‘nature’ and ‘wildlife’ we often imagine rolling grasslands or shady woods, slow-flowing rivers, and beaches devoid of people. Places where the natural world can exist with little or no influence from humanity, a contrast to the roads and buildings and human domination of towns and cities.

Perhaps this view is best summed up in these lines by eighteenth-century English poet William Cowper:

God made the country, and man made the town.

What wonder then that health and virtue, gifts

That can alone make sweet the bitter draught

That life holds out to all, should most abound

And least be threaten’d in the fields and groves?

Of course this is a delusion: even in the eighteenth century, the British countryside, along with most of northern Europe, was

every bit as 'man-made' as the towns and cities, the landscape having been repeatedly deforested and trees replanted, cultivated by farmers, and grazed by livestock for thousands of years.

This is also true across much of the world, where habitats have been changed by local societies.

The first European explorers of Central and South America thought that they were seeing pristine wilderness, untrampled by human feet, in the rainforests, savannahs, and dry woodlands. We now know from satellite and ground surveys that large parts of these ecosystems contain the remains of pre-Columbian human settlements; indeed, some areas were *less* densely forested prior to the arrival of Europeans in the 16th Century.

Britain, along with much of northern Europe, has little natural habitat as such, and even our wildest and most remote areas consist of what we term 'semi-natural' plant communities that have been created following deforestation hundreds or thousands of years ago. Thus the wild, rural landscapes that inspired so many naturalists in their formative years are 'natural' only within the bounds of human influence.

In any case, this distinction between 'wild' and 'anthropogenic' is an artificial one because, as city dwellers all over the world see every day, nature finds a home, a habitat, a place to thrive, wherever it will.

Part 2

In 2017 I visited the Chinese city of Shenzhen to attend the *International Botanical Congress*, a six-yearly event that brings together the world's plant scientists - 7,000 of them the year that China hosted the event!

The conference was a wonderful and stimulating event for a scientist like myself, but it was a different encounter, not with other scientists, that has stuck with me since then.

It was early enough in the morning that my cup of take-out coffee was still half full and hot, but the heat and humidity of Shenzhen was rising, and locals walking to work had unfurled their sun-shading umbrellas. On my way to the enormous conference centre I was stopped short by the sight of a small, yellow bird lying still on the pavement.

Crouching down I carefully picked it up and examined the fresh corpse.

It was an adult Swinhoe's White-eye, the pale ring that gives this group its name now closed to the world. I had often seen these birds flying around the urban forest of this, the sixth largest city in China, but this was my closest encounter.

Cause of death was unclear, there was no obvious damage. Perhaps it had flown into a plate glass window of one of the

many high-rise office blocks in this rapidly expanding metropolis?

Carefully I placed the bird on the damp soil of a nearby planter filled with exotic shrubs. No doubt a larger, scavenging bird, perhaps one of the corvids, would come along and take advantage of the corpse.

It's always exciting for a northern European like myself to visit cities in the world's tropical zones and compare the way the roads are laid out, the architecture and, especially for an ecologist, the wildlife that inhabits these urban landscapes. Across the tropics, of course, large conurbations vary hugely in this regard.

Shenzhen is sleek and modern and rather manicured. In contrast, older cities such as Hong Kong, the first tropical city that I encountered, back in 1993, wear their age like a coat, embroidered with layers of human history and natural colonisation.

The Brazilian city of Campinas, which I visited during a teaching trip in 2013, is also older and more settled in itself, big and busy, hot and hectic.

Temperatures when I was there were in the low thirties centigrade in the open streets, but as soon as we passed beneath the shade of any of the large trees that lined the

streets and small squares, the direct heat from the sun was blocked and the shade made it much more comfortable.

Urban ecologists have long recognised that city trees provide multiple ecosystem services for city dwellers. They store carbon in their woody trunks, branches, and roots, of course, but they also significantly alter the local microclimate.

Nowhere is this more apparent than in subtropical and tropical regions, but you can also feel their effects even in a north temperate city, like Copenhagen, where the presence of trees cools parks and pavements, insulating against high temperatures. In the winter, evergreen species in particular also provide some insulation against the cold.

Trees are also beautiful, of course, and so the analogy with birds works on multiple levels: a city without trees is like a bird without feathers, because trees and feathers are both functional and ornamental. The latter to human eyes, as far as trees are concerned of course – no tree is trying to attract another by how they look!

But trees need birds, sometimes as pollinators, often as seed dispersers, and regularly as predators of the caterpillars and other insects that would eat their leaves.

These species and how they make a living in urban areas are interconnected to one another and to people.

The city belongs to the wildlife as much as it does to us.

So if a city without trees is like a bird without feathers, then a city without birds is not really a city at all.