

# The urban rain forest

BY LUCILLE DAVIE

It's official – there are six million trees in Johannesburg. On satellite pictures, the city looks like a rain forest, albeit man-made. There are 1.2 million trees within the parks and on the pavements, and 4.8 million in private gardens throughout the suburbs.

So says Alan Buff, senior manager of technical support and training at Johannesburg City Parks. How did he arrive at that figure? "In 1996 we counted the trees in the northern quadrant of the city, and when the municipalities joined forces to form the unicity, their records, together with the records from 1904, gave us a figure of 1.2 million trees," he says.

"For a count of private gardens, we took the total number of stands and their size, and after getting a sample of the average number of trees per stand, we arrived at the figure of 4.8 million."

In the 1880s when Afrikaner farmers settled on the Witwatersrand there was hardly a tree in sight. The highveld is a typical savannah/grassland system, which means that besides grassland and scattered scrubs, there are no naturally occurring trees. These early farmers brought seeds from the Cape and planted acorn, oak and walnut trees. The Bezuidenhout family, among the first white settlers in the area, planted fruit trees in Judith's Paarl and Cyrildene, east of the city centre.

Tree planting took a huge leap forward when gold was discovered in 1886. The early mining companies developed a nursery at the Horticultural Training Centre at Zoo Lake. Here experiments were conducted to test which trees were suitable for mine props. This resulted in blue gums being planted in suburbs with water like Saxonwold, Parktown, Langlaagte, Craighall and Fairlands.

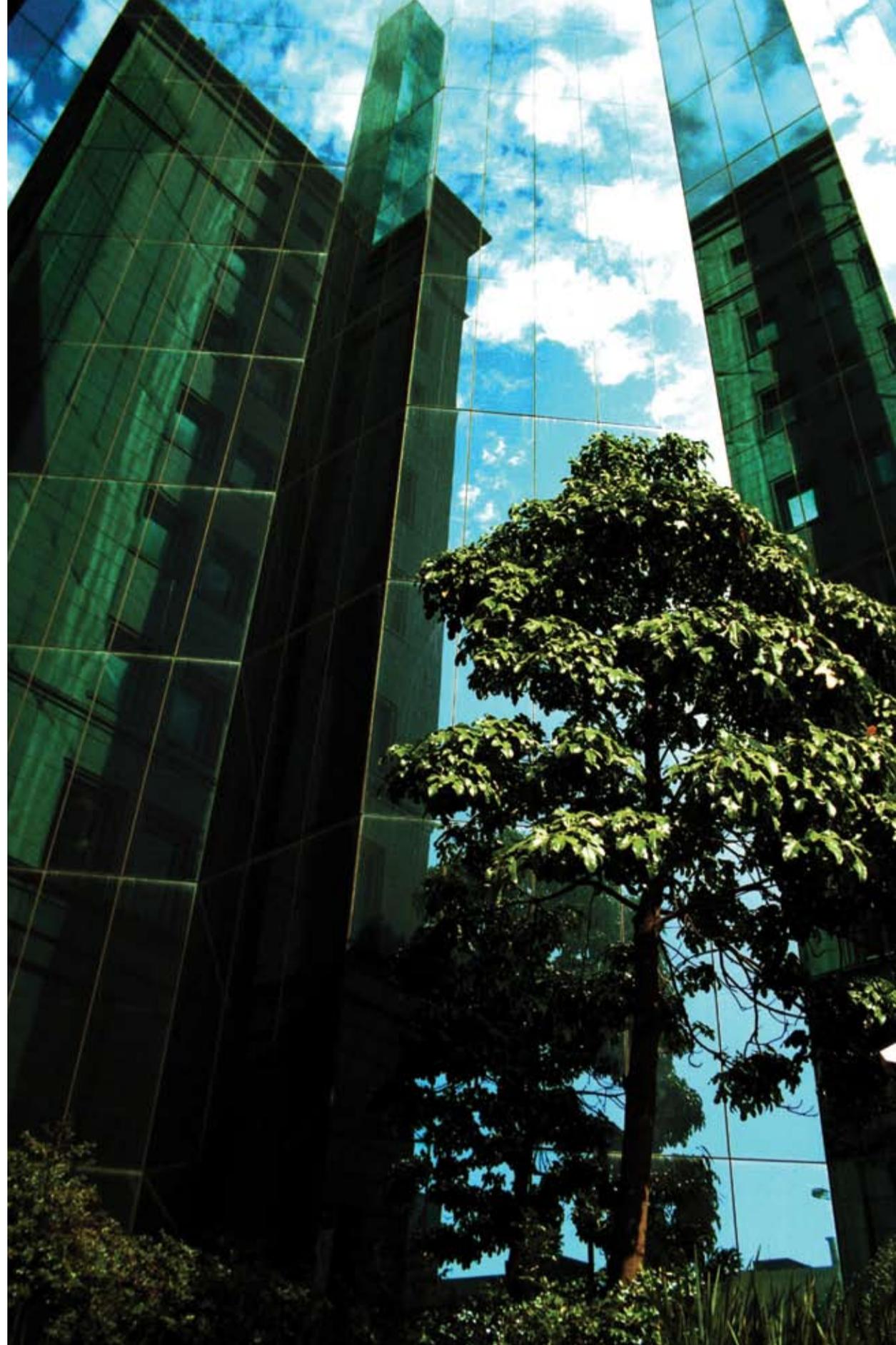
At the same time other species of trees, all exotics – oaks, planes, pepper trees – were given to residents, particularly in Parktown and Westcliff, to plant in their gardens and also along their streets.

Joubert Park and what was known as Kruger Park, now Park Station, were laid out as the city's first parks, and planted with pepper trees, a tree that was popular for planting near stables as it was believed to repel fleas. "It was discovered that pepper trees were not suitable street trees, as they get too big, so these trees were taken out," says Buff. Some of these 100-year-old trees can still be seen around the city: in Parktown, Houghton and at Tolstoy Farm, Mahatma Gandhi's settlement 35km south-west of Johannesburg. "Gandhi particularly liked pepper trees – he planted a circle of them at the farm, and they're still there," adds Buff.

As the suburbs of Johannesburg expanded, street trees were planted and preference was given to trees the colonials were familiar with: oaks, planes and jacarandas. "The perfect street tree must be quick growing, grow straight up, tolerate pruning, and have a root system that does not interfere with the underground systems or break the tar paving above," says Buff.

Indigenous trees don't qualify: they don't like pruning and they interfere with underground systems. This doesn't mean there are no indigenous trees in the city and suburbs. Rather, they are planted in parks and open spaces where their restrictions are not a problem.

Some of these parks are: the Kingston Frost Park on the border between Brixton and Auckland Park, The Wilds in Houghton and the Johannesburg Botanical Garden in Emmarentia.



To get a sense of the natural vegetation of early Johannesburg, the Melville Koppies Nature Reserve, visit the 67-hectare area just beyond the city centre, in Emmarentia. It was proclaimed a reserve in 1959 and a historical monument in 1968.

Trees don't just make the city look pretty, they have a real environmental function, says Buff. They control the greenhouse effect: when heat rises from the tar, trees act as a natural coolant. Carbon dioxide emitted from cars is taken in by trees and converted into oxygen. Trees also reduce noise levels.

So, does Johannesburg have enough trees? Yes, says Buff: "We have 1.2 million trees, which is sufficient, but we need more." Buff says there is an active programme of planting trees, especially in treeless suburbs. "Four years ago we planted 17 000 trees at Orange Farm, and on Arbor Day last August we planted 4 000 trees in Soweto."

A problem for tree planting in Soweto is that the sewer systems are close to the surface and the pavements are not wide enough to accommodate trees. "The pavements have to be a little over two metres wide to plant trees. In Alexandra, for instance, pavements are so narrow that you can't even get a wheelchair along them," says Buff. Instead, City Parks has offered homeowners trees to plant in their gardens in an effort to get more trees into the suburbs.

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