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'Van Riebeeck's curse' killing off historic oaks in Gardens

Fungus threatens Peninsula forests, prof warns

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A killer fungus which is destroying the oak trees in Cape Town's historic Company's Gardens could have been introduced on citrus trees planted more than 300 years ago by Jan van Riebeeck.

The mushroom-like fungus, which has been described as "Van Riebeeck's curse" after the leader of the first European settlers at the Cape, could spread, in time, to natural and exotic forests throughout the Peninsula and elsewhere.

This startling discovery was made by Michael Wingfield, Mondi professor of forest pathology at the University of the Orange Free State.

"In generations to come, this could become one of the most dominant and troublesome plagues in Cape gardens," he said. The discovery of the fungus could mean extensive replanning and replanting of the Company's Gardens, said Alan Botes of the city council's parks and forests department.

"We want the people of Cape Town to know about the problem in the Gardens and to work with us in finding a solution," he said.

Professor Wingfield, who was asked by the city council to find out why the oak trees in the Company's Gardens were dying, made the discovery after two years of scientific investigations, including DNA sequencing and finger-printing.

Tom Harrington of Iowa State University, an internationally recognised authority on the fungus, spent six months working with Professor Wingfield on the project.

During a visit to Cape Town a fortnight ago Professor Wingfield found "quite unexpectedly, that the fungus was fruiting abundantly, producing many kilograms of honey-coloured mushrooms in many parts of Government Avenue and the Gardens".

There was even some "amazing production" of the mushrooms in the gardens of President Mandela's office at Tuynhuys, he said - which he and his team discovered "after climbing over the fence and finding ourselves surrounded by policemen".

Professor Wingfield said that a report in Saturday Argus in January 1996, which said that in Van Riebeeck's time the avenue was lined with orange and lemon trees, gave him the idea of investigating the origin of the citrus trees.

Stowaway: the mushroom-like fruit of the killer fungus

The fungus was the European *armillaria mellea*, he said, also known as the "honey fungus" because of its golden colour.

"Our DNA finger-printing work over the past two years has given us an accurate impression of the origin of the fungus," he said, adding that this was the first time a species of the fungus, of which there were many, had been shown conclusively to have been transferred between continents.

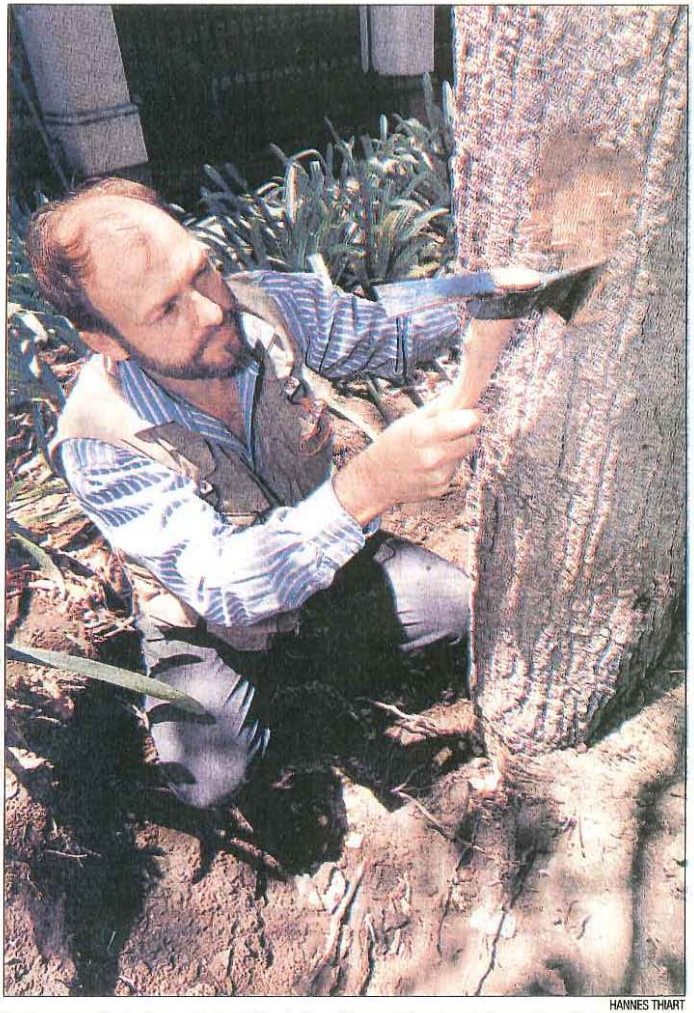
"The fungus was introduced into the Gardens, most likely by the very early settlers.

"It could well have been on the citrus trees planted by Jan van Riebeeck.

"If we assume that the fungus can move radially through the soil for about one metre a year, it has been there for about 300 years."

Many apparently healthy trees in the Gardens and in Government Avenue, including shrubs such as hydrangeas and the historically significant mulberry tree, were infected and would die, he said.

The environment around the trees was "highly conducive to infection" and "very drastic measures were needed to improve the situation", said Professor Wingfield.



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Basic research: Professor Michael Wingfield, professor of forest pathology at Free State University, uncovers fungus-caused damage to an oak tree in the Company's Gardens