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## Scientists barcode SA flora

A small group of scientists led by the UJ's Dr Michelle van der Bank has launched an ambitious project to collect all the plants of the Kruger National Park and use DNA sequencing and barcoding techniques to study this rich flora of South Africa.

DNA sequencing is becoming a popular tool to study organisms. In plants, it is used to study relationships and to track down the history of species diversification or drawing the "genealogic trees" of groups of organisms.

In 2004, the Consortium of Barcode of Life launched an initiative to promote DNA barcoding, a process enabling the rapid and inexpensive identification of the estimated 10 million species on earth.

The technique has been successfully applied to animals. However, in the case of plants, the search for short fragments of DNA that will act as "barcode" has not been successful. Now scientists from 11 institutions all over the world are searching for the elusive gene that will allow them to barcode all 300 000 species of plants on earth.

As part of this effort, Dr Van der Bank and her team – Vincent Savolainen of the Royal Botanic Gardens in Kew, UK, and three UJ postgraduate students, Olivier Maurin, Renaud Lahaye and Sylvie du Thoit – started collecting plants in Kruger in September 2005. To date, they have collected more than 1 600 specimens of plants. This initiative represents the most complete and recent inventory of the park's rich flora. It is also the largest and most diverse sampling ever made for barcoding purposes in a protected area.

All samples are taken back to the UJ where they are analysed, categorised and stored. DNA duplicates are then sent off to Kruger and other institutions such as Kirstenbosch Botanical Gardens. Plans are also under way to have these data placed on the Consortium of Barcoding's website where they will be available for other scientists.

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