Are you involved in the illegal cycad trade?

Public misconceptions which are detrimental to the survival of South Africa's cycads

by **Kirsten Retief**, **Adam West** and **Michèle Pfab**

ABOVE: Healthy cycad populations are a rare sight. Poachers are denying present and future generations the experience of seeing these iconic cycads in the wild. Photo: Karin van der Walt.

Cycads (all *Encephalartos* species and *Stangeria eriopus*) are the most threatened plant group in South Africa. They are also one of the most threatened groups of plants in the world. In South Africa almost 70% of our cycad species are threatened with extinction, with four species on the brink of extinction and seven species with fewer than 100 plants left in the wild. The primary threat to South African cycads is illegal harvesting for landscaping purposes and private collections, mostly to satisfy a domestic market. This avid collecting has devastated many wild cycad populations.

Who are the illegal traders?

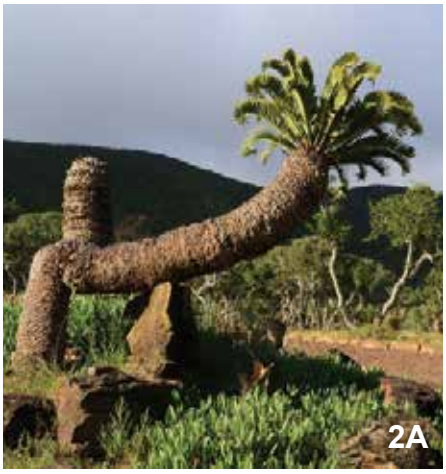
There are three types of people that drive the South African illegal cycad trade. The Opportunist, who makes massive profits by arranging for poachers to steal wild cycads or by buying cycads from poachers at a cheap price to sell for a much higher value. The Egotist, who wants to show off his large, rare cycads bought at an extraordinary price. The Naive, who is sucked into various misconceptions about the cycad trade and often ends up getting conned by the seller. Greed and ego are difficult to change, but misconceptions can be changed. How can you avoid 'innocently' contributing to the decimation of our cycads? The following are common misconceptions to watch out for.

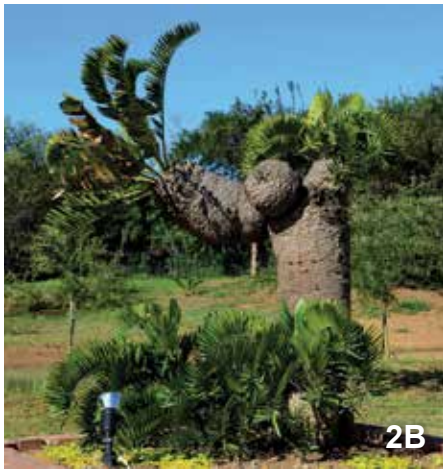
Buying cycads contributes to conservation

This is NOT true in the case of the illegal cycad trade in South Africa. The demand from private collectors for large cycads is what is driving the poaching of wild cycads. Once all specimens of a species are removed from the wild, it is functionally EXTINCT. Even if there are specimens left in people's gardens, those specimens are not part of the natural environment anymore, and cannot maintain a viable population. Conservation action will then have to rely solely on propagating and planting those species back into their natural environment, which is not a practical solution as it will take hundreds of years before populations are restored to their former glory.

'I'm just an innocent bystander'

When buying a suspicious cycad from someone, such as a guy on the street or even a nursery, you might claim innocence because you did not physically remove the cycad from the wild yourself and thus didn't know it originated from the wild. Often these plants will be accompanied by a permit, as a lapse in the implementation of nature conservation legislation in Gauteng between 1994 and 2001 has resulted in the permitting of thousands of wild-harvested cycads. However, this is the equivalent of knowingly buying a stolen car.





1: One 'bust' this year yielded 28 Eastern Cape Blue Cycad *(Encephalartos horridus)* plants stolen from the wild. This cycad is listed as Endangered in the IUCN Red List.

2A and **B:** The Suurberg Cycad *(Encephalartos longifolius)* is listed as Near Threatened in the IUCN Red list. The specimen on the left was recently planted in a private garden. The same species in the photo on the right was confiscated from poachers in the wild. Note the resemblance in the growth form with multiple branching and deformed, long stems with small leaf bases, indicating a wild origin for both individuals (see text box 'How do I know that I am buying an illegal cycad?' on page 15).

3: A Suurberg Cycad *(Encephalartos longifolius)* plant that has been grown in a nursery. This plant has large leaf bases, a straight stem with no deformities and none of the warning signs that may characterize a wild cycad.

4: The Karoo Cycad *(Encephalartos lehmannii)* is listed as Near Threatened in the IUCN Red List. This specimen is of wild origin as evidenced by the damage to the lower section of stem either by porcupines or *muthi* collectors. This plant is now in a private garden.

5: The Karoo Cycad *(Encephalartos lehmannii)* in the wild. Note the porcupine damage and how the stem has fallen over and is bent.

6: The Lebombo Cycad *(Encephalartos lebomboensis)* is listed as Endangered in the IUCN Red List. This wild specimen is growing from a cliff face, its stem hanging over the edge in a crescent shape.

7: The Lebombo Cycad *(Encephalartos lebomboensis)* confiscated from a private garden. This plant is of wild origin and used to grow on a cliff face causing the stem to be crescent shaped.

8: The Lebombo Cycad *(Encephalartos lebomboensis)* grown from seed in a botanical garden. Observe the straight stem with a thicker base than a wild plant would have (see previous photo). No warning signs are present on the plant.

Photos: Kirsten Retief.

One can often see signs that the plant previously grew in the wild, which should immediately make you ask the question, 'Where did this plant come from and is it legal to purchase?'

'Cycads are a good investment for my retirement or to leave as an inheritance for my children'

Spending hundred thousands of rands on a collection with endangered, rare and large cycads is a bad investment for the following reasons. Due to the extraordinary pressure wild cycads are under, legislation around the selling of highly threatened species and large specimens is likely to change. Thus there is a possibility you will be unable to legally sell your expensive collection in future. Since 2012, the law states that it is illegal to sell or trade in any formerly wild cycads (see text box 'Cycads and the law' on page 15). Therefore if you possess

HOW DO I KNOW THAT I AM BUYING AN ILLEGAL CYCAD?

An argument that is often made by cycad collectors and nurseries is that 'I didn't know that I was buying a wild cycad.' Here are some guidelines that should set alarm bells ringing. A cycad may be of wild origin if it has one or more of the following features:

- micro-chip in the stem (the plant would need to be scanned to determine whether the micro-chip identifies the plant as a legal garden cycad or a wild cycad)
- stem with strange deformities
- overhanging stem shaped like a crescent
- variations in the diameter of the stem (indicating varying growth rates)
- long stems with small leaf bases (indicating slow growth)
- compact, generally smaller leaf bases at the lower parts of the stem (indicating harsher wild conditions) and bigger leaf base further up the stem (indicating milder garden conditions)
- multiple side branches from the main stem
- burn marks on the stem from veld fires
- stem sanded with wire brush or sand paper to remove burnt leaf bases
- cut marks on the stem made from a panga when removing the cycad from the wild
- deep holes in the base of the stem where poachers have tried to remove the micro-chip
- absence of leaves
- patches of leaf bases completely removed by porcupine or *muthi* collectors in the wild (very unlikely in a nursery)
- numerous old leaves still attached to the stem or recently removed (this is the dress of the cycad, which is usually cut off in garden specimens)
- no permit or the permit is not for the correct size and threatened status of the species

CYCADS AND THE LAW

- Cycads are listed as Threatened or Protected Species (TOPS) in terms of the National Environmental Management: Biodiversity Act (NEM:BA) of 2004. Permits are required for possession and translocation of all indigenous cycads or cycad material. (Note these are not the only restricted activities requiring permits for cycads.)
- Harvesting of wild cycads without a permit has been illegal since the 1970s.
- As from May 2012, it is prohibited to harvest, trade, sell, buy, donate, import, export, convey or receive any wild cycads (even plants that have possession permits).
- Possession of wild origin cycads is also prohibited, unless they form part of legally obtained parental stock where permits were issued prior to May 2012.
- CITES permits are required for all imports and exports of cycads and cycad material. (South Africa has been a signatory to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) since 1975. Cycads are listed in Appendix I meaning that commercial trade is not allowed, however artificially propagated specimens are exempt from this ban.)
- Artificially propagated cycads with a stem diameter of more than 15 cm (or more than 7 cm for dwarf species) may not be exported from South Africa.
- Penalties for contraventions of any of the above laws (e.g. collection, possession and trading in illegal cycads) are up to 10 years in prison or a R10 million fine, or both.

If you suspect anything is illegal, the responsible action is to report any suspicious cycads or activities to the Department of Environmental Affairs' Environmental Crimes Hotline on 0800 205 005.

a cycad removed from the wild prior to the 1970s (when it was legal to remove cycads from the wild), you may still legally possess those cycads, but you will be unable to sell them. Additionally, many cycads are damaged while being removed and die once they are re-planted, resulting in a loss of investment. This is particularly the case for large plants that are less likely to survive relocation.

'They can't prove my cycads are from the wild'

Recent developments in forensic tracing of wild cycads are making this a risky bet. There are many techniques that can be used by the authorities to prove wild origin. Individually marked micro-dots that are impossible to see with the naked eye are sprayed onto cycad stems and micro-chips are inserted into the stems of wild plants. Genetic studies have identified fingerprints for each individual cycad in some populations. And we recently developed a method that can be used to identify the origin of a cycad using chemical tracers, where pre-marking of wild plants is not required. The chemical signal can stay in the plant for up to 30 years, allowing us to identify plants removed from the wild long after the relocation event. These new methods make imprisonment a reality for people who have so far managed to evade the law. You could go to jail for up to 10 years, be heavily fined and have all your cycads impounded.

Don't be caught red-handed

As a cycad owner, or trader, you have the responsibility of determining exactly where your cycads come from and not to be conned into what the seller is telling you. You are not going to buy a diamond ring off the street with no proof of authenticity and legality, so why not apply those principles to a cycad, and help to save these iconic plants before it is too late?

READING

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GET CONNECTED

Dr Adam G. West is a Senior Lecturer at the Department of Biological Sciences, University of Cape Town. His research focuses on the interaction between plants, people and environmental change. He can be contacted at email: adam.west@uct.ac.za.

Michèle Pfab is the scientific co-ordinator of South Africa's CITES Scientific Authority, a committee of experts mandated to advise the Minister of Environmental Affairs on the utilization of and trade in South Africa's wildlife with a specific focus on species listed in the Appendices to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and species listed as threatened or protected in terms of section 56 of the National Environmental Management: Biodiversity Act (NEM:BA) of 2004. She holds an MSc degree in Resource Conservation Biology from the University of the Witwatersrand and has 17 years of experience in conservation practice within the government sector.

Kirsten Retief recently completed her MSc in Conservation Biology at the University of Cape Town under supervision of Dr West and Ms Pfab. Her research focused on tracing the origin of formerly wild cycads using stable isotopes. She is continuing this work as a Research Assistant for the South African National Biodiversity Institute and the University of Cape Town and can be contacted at email: kirsten.retief@gmail.com.