

tion seems to do well and seedling regeneration is taking place, total numbers are very low and this species needs protection against depletion to ensure the survival of mature reproducing plants in the wild.

## MICROCHIPPING

### A weapon in fighting cycad poaching

To combat the illegal trade in cycads, nature conservation officials make use of microchips to provide a foolproof system of identification. A transponder, in the form of a microchip, is inserted in an adult cycad. As they say, the best things come in small packages and the microchip which is not much bigger than a pin nib, is very effective. Little damage is done to the plant as the microchip is encased. Every microchip has a specific number that is recorded on a data base. As no power source is needed, the chip can operate for the duration of the cycad's lifespan.

A specific type of scanner (that is only in the possession of nature conservation officials) picks up the microchip embedded in the cycad's stem, which provides an identity number.



Cycads recovered by Mpumalanga Nature Conservation after they had been poached from the veld near Dryde River. The poachers threw the bags away as they ran away from the investigators ... and one wonders if these plants which survived storms and droughts for hundreds of years, will ever be safe!

The chip cannot be found with an X-ray machine. The chip can tolerate extreme temperatures, is waterproof and cannot be destroyed by high radio frequencies. All the stored data information, such as the plant's diameter, sex and exact location in the wild can be retrieved. This can prove that a cycad was stolen from a specific location.

Insects and soil samples can be collected to determine where the cycad came from. This evidence can also be used in court.

A plant from any one of the provinces is identified by its unique number which also gives details of its location. The Global Positioning System (GPS), a satellite-based navigation system, is used to determine the position of microchipped plants.

This method is seen as vital in conserving the remaining wild populations of cycads. Conservation authorities are microchipping cycads growing in the wild to stop the theft of the plants.

## LEGISLATION

The Constitution of South Africa (Act 106 of 1996) states that:

"24. Everyone has the right:

(a) to an environment that is not harmful to their health or well-being; and

(b) to have an environment protected for the benefit of present and future generations, through reasonable legislative and other measures that:

(i) prevent pollution and ecological degradation;

(ii) promote conservation; and

(iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development."

All the private owners of cycads in the Eastern Cape and in most of the other provinces must have permits. Since March 2004, no more possession permits were issued. It happened in the past that a person made a statement that a cycad had been in his garden when he bought the house. Then a few weeks or months later the same person requested a permit to sell the cycad.

Various provinces have different legislation about the protection of cycads. Mpumalanga Provincial Act 10 of 1998 is applicable for Mpumalanga's Nature Conservation. Talking to Gauteng Nature Conservation's Leon Lötter about permits and legislation in Gauteng, he said that there is existing legislation, but that this province will look into specific legislation for the province in the future. Other legislation that gives Nature Conservation investigators jurisdiction is Act 73 of 1989 and Act 107 of 1998.

Internationally cycads are protected under the Convention on International Trade in Endangered Species (CITES) of Wild Fauna and Flora. South Africa is a signatory to CITES. The aim of CITES is to prevent plant and animal species to become extinct as a result of trade. This means that wild plants and animals cannot be traded across international borders if there is any chance that this trade will contribute to their extinction. South African cycads are all listed on Appendix 1 (the highest level of protection) of CITES because many of them are close to extinction.

## A VISIT TO THE EASTERN CAPE

We visited Mr Jaap Pienaar from Eastern Cape Nature Conservation. He told us that during 1974 cycads in the Eastern Cape were declared endangered and in 1985 all cycads were declared endangered. Of the 39 South African cycad species, 18 are found in the Eastern Cape. Some species are not as rare as others but due to the fact that not everyone can easily identify which one is which, all of them have to be seen as rare.

Mr Pienaar said that it was decided to do something on national level about the cycad issue. They started investigations and during one of the largest operations in South Africa a Sandton resident was arrested with 340 cycads in his possession, with a value of approximately R1.4 million. But despite the value of these cycads, the man only received an R800 fine! This was unacceptable as something like this cannot be seen at such a low priority. This issue was referred for discussion in parliament. The Department of Justice became involved as environmental crime must be taken seriously.

In 1989 the first national cycad workshop was held where policies and legislation were discussed. Two more workshops followed and it was decided to introduce a marking system.

Mr Pienaar told SERVAMUS of an incident where 17 of the rarest cycad species in the Eastern Cape had been stolen. The Organised Crime Unit and Nature Conservation retrieved