Namibian Chamber of Environment

Background Information on the Control of

Invasive Alien Cactus species in Windhoek

1 Introduction

There are at least 20 different species of invasive cacti in Namibia. These are alien plants that were imported to Namibia, usually as ornamental garden plants, from where they escaped into the surrounding countryside. They came originally from parts of South America, Central America and southern North America. Invasive alien cactus species are extremely destructive. They displace local plants and have a hugely negative impact on indigenous species – both plants and animals. If unchecked, they can destroy vast areas of productive farmland. In Australia, one species of cactus that is currently spreading rapidly in Namibia, destroyed about 23 million ha of rangeland. The control of invasive alien cacti is a real and urgent priority for Namibia.

2 Control methods

Different control methods are needed for different species. Up until now, the main form of control in the Windhoek area has been manual removal. This is an effective way of managing the problem in relatively small areas and before the cactus plants have spread over too large an area. And indeed, for many species it is the only currently available method of control.

For a few cactus species in Namibia, there is another method – that of biocontrol (or biological control). This involves the release of a pest insect that feeds only and exclusively on a specific cactus species. Once established, these insects are capable of significantly reducing the cactus infestations of the target species to levels where they are no longer a significant problem.

There are three cactus species in Windhoek and surrounding areas that can be controlled by means of biocontrol. These are:

- Imbricated cactus (*Cylindropuntia imbricata*)
- Pest pear cactus (*Opuntia stricta*)
- Snake cactus or midnight lady cactus (*Harrisia pomanensis*)

Imbricated cactus (*Cylindropuntia imbricata*)

Pest pear cactus (*Opuntia stricta*)

Snake cactus or midnight lady cactus (*Harrisia pomanensis*)

Close-up of *Opuntia stricta*.

These cactus species are all highly invasive (i.e. they reproduce and spread very quickly), and have already infested large areas surrounding Windhoek, and are spreading ever further into the countryside. Some of these are already widely distributed across Namibia and are getting dangerously out of hand.

Two of the biocontrol agents are cochineal insects, which appear as white waxy blotches, like cotton wool, on the cactus leaves. The other is a mealy bug which forms galls (lumps) in the cactus plants and prevents them from breeding. All of these species feed on the plants by sucking the sap (plant juices), which kills or sterilises the plant. They do not impact any other plant species.

3 What about the cactus species with no biocontrol?

All the other cactus species in Namibia, (apart from *Opuntia ficus-indica*, for which biocontrol was successfully introduced more than 20 years ago) do not currently have a viable form of biocontrol. These species need to be manually removed.

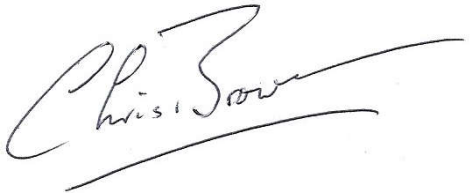
It is very important that all appropriate forms of control of invasive alien cactus plants are implemented. The introduction of biocontrol for the three species listed above does not mean that manual control of other cactus species must stop – quite the opposite. By using biocontrol on some species means that manual control can now be focussed more intensively on the most problematic cactus species for which there is no biocontrol.

4 Please continue to support the manual control of cacti

Many of the cactus species that do not have a biocontrol agent are highly invasive and pose a serious threat to Namibia's environment, biodiversity and the productivity of the rangelands. It is thus vitally important that manual control for these species continues and expands. The Namibian Chamber of Environment has supported the manual control of cactus species in and around Windhoek in the past, and the NCE will continue to do so in the future, by providing some grant funding to these initiatives.

We would like to invite individuals, businesses and other organisations to join us and the many other generous supporters of the cactus removal efforts to contribute financially to the excellent work on manual cactus clearing that is taking place in and around Windhoek.

Thank you for your support.



Dr Chris Brown

CEO: Namibian Chamber of Environment