



NZG
National Zoological Gardens
of South Africa

SUBSCRIBE
to our news

JOIN
the ZooClub

BECOME
our friend

ADOPT
a wild child

Get involved!



DONATE
to the Zoo

Home

Previous issues

NZG website

Contact us

September 2013

Contents / home

Elephant tusk extraction

Holiday courses

Endangered amphibians

Expo for Young Scientists

Are you a health professional?

Enter our photo competition

The Primate Diaries

Environmental enrichment

Spotted eagle owl

Learners impress with research

Birds, stars and "magic" for
competition winners

Rhino poaching update

Conservation Grapevine

Elephant tusk extraction carries a lot of weight for SA vets

Upon invitation from the Pozna Zoo in Poland, the National Zoological Gardens of South Africa's research veterinarian and expert in elephant anaesthesia, Dr Adrian Tordiffe, and veterinary dentist, Dr Gerhard Steenkamp from the Faculty of Veterinary Science at the University of Pretoria, undertook the task of performing a complete tusk extraction on an elephant at the Pozna Zoo.

The 14-year-old, 5.2-ton African elephant bull, Ninio, had fractured his tusk in 2009 and zoo staff treated the affected area. He damaged the tusk again early in 2012 and it became infected, causing pain and some swelling to his face.



Most of the extractions performed in South Africa have been on elephants smaller than Ninio, who is considered to be one of the largest elephant bulls (for his age) currently in captivity. (Picture: Dr Adrian Tordiffe)



During a [previous visit](#) to Pozna Zoo in Poland, the team managed to drain an abscess that had developed around the root of the elephant's left tusk and were also able to remove the core of the tusk.



Dr Gerhard Steenkamp (left) gets to work separating the tusk from its socket in preparation for the complete extraction. (Picture: Dr Adrian Tordiffe)

First visit to Pozna Zoo

Recently, Drs Tordiffe and Steenkamp returned to Poland following a [previous visit](#) to complete the full tusk extraction process. The team had previously managed to drain an abscess that had developed around the root of the elephant's left tusk and were also able to remove the core of the tusk.

They did not have sufficient time to remove all the damaged and infected ivory, however, as there was concern about the duration of the operation and the time that Ninio spent under anaesthesia.

Final procedure

For this final procedure, Ninio was again anaesthetised and positioned onto his right side to expose the left tusk. Dr Steenkamp got to work separating the tusk from its socket in preparation for the complete extraction. After more than three hours, Dr Steenkamp managed to loosen the tusk sufficiently to pull it out in two pieces using a winch. The whole procedure took 3 hours and 45 minutes.

"The tusk was obviously deformed by the chronic infection, but all the pieces were successfully removed. At its base it had a diameter of 20 cm. It could well be the largest tusk (in diameter) ever extracted from a living elephant for medical reasons," says Dr Tordiffe.

Ninio recovered remarkably well from the surgery and started eating within a few hours after the operation. The team were delighted with his progress and his response to the various pain medications given. The following day, Ninio was interacting with the other elephants and with his keepers.

"The healing process will still take some time; about 18 to 24 months for his tusk socket to close up completely. In the meantime, the socket will be flushed out daily," says Dr Tordiffe.

Dr Steenkamp has worked on elephant tusks for the past 14 years. He said this was by far the most challenging extraction that he has performed as most of the equipment used had to be specially developed for an elephant of this size.

Says Dr Tordiffe: "Only a few tusk extractions have been performed around the world. Dr Steenkamp is one of

only a handful of veterinarians in the world who has successfully performed this procedure. He has worked on over 60 elephant tusks in South Africa, but only a few of those have been extractions. Most of the extractions performed in South Africa have been on elephants smaller than Ninio, who is considered to be one of the largest elephant bulls (for his age) currently in captivity. The size of the tusk makes a huge difference in how the procedure is performed."

Dr Tordiffe has been a veterinarian at the NZG for the past six years and has worked with the zoo's elephants during this time. He has also had the privilege of working with elephants outside the zoo environment.

The procedure was filmed by the BBC for the programme "Operation Wild", which is expected to be aired in 2014.

Did you know?

Tusks are extremely strong incisors that are occasionally damaged or fractured when they come into contact with hard or abrasive surfaces like metal or concrete. Although these kinds of injuries are thought to be more common in captive elephants, traumatic tusk injuries have also been noted in wild elephants. Once the pulp cavity of the tusk is exposed, it is vital that the exposed root canal is treated and sealed as soon as possible to prevent infections. Extractions are only necessary if this treatment fails or is delayed, and an infection of the tooth root has set in.

By Dr Adrian Tordiffe, Research Veterinarian & Angelin  Schwan, Communications Officer, NZG

The National Zoological Gardens of South Africa is a proud facility of the National Research Foundation

All information copyright   NZG
[Terms & Conditions](#)

CONTACT US

Tel: +27 12 339 2700
Fax: +27 12 323 4540
Email: info@nzo.ac.za

HOW TO FIND US



232 Boom Street, Pretoria
GPS: S25 44.349' E028 11.329'

