

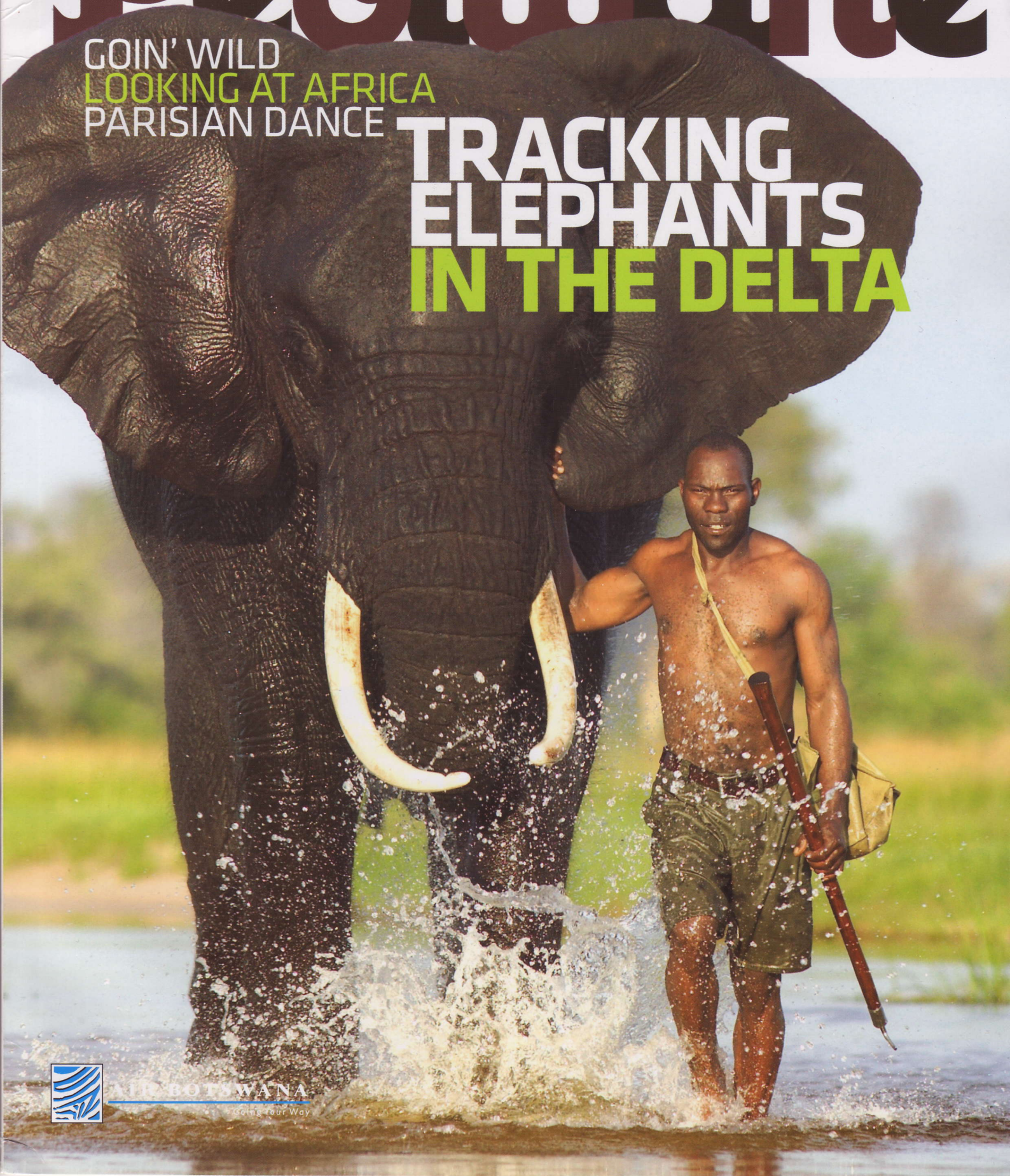
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# Botswana

GOIN' WILD  
LOOKING AT AFRICA  
PARISIAN DANCE

## TRACKING ELEPHANTS IN THE DELTA



AIR BOTSWANA

Going Your Way

# GOIN' WILD

Wildlife researcher **Kate Evans** explains the goals, accomplishments, challenges and findings of a research project that returns trained elephants back to the wild. Photos by **Kate Evans**

It was dawn and the blood red sun was just breaking the horizon through the palm trees, as I left camp and prepared to start my day's work. I had been away from Seba Camp for a while, 18 months in fact, pouring over statistics and papers, pulling data and theories together to finish my PhD degree. It had not been an easy time, and my reward was to be back in the Okavango Delta with the elephants that I had studied for three years.

It was a glorious day; and as I drove around in search of elephants—accompanied by the dawn chorus of Botswana's bush—I could think of nowhere else I would rather be. Impala and baboon grazed together in the floodplains, whilst giraffe loped past as I carried on, in search of the pachyderms. I saw a few old bulls, hanging out together by a water hole. I recognised them as old friends, and I felt that I was 'home.'

Today I was on a mission to see two elephants in particular. Whilst I was away, longing for the sights and smells of the bush and the company of elephant, the female Nandipa had had a calf—a male we call Ntongine. It was this mother and her calf I was searching for.

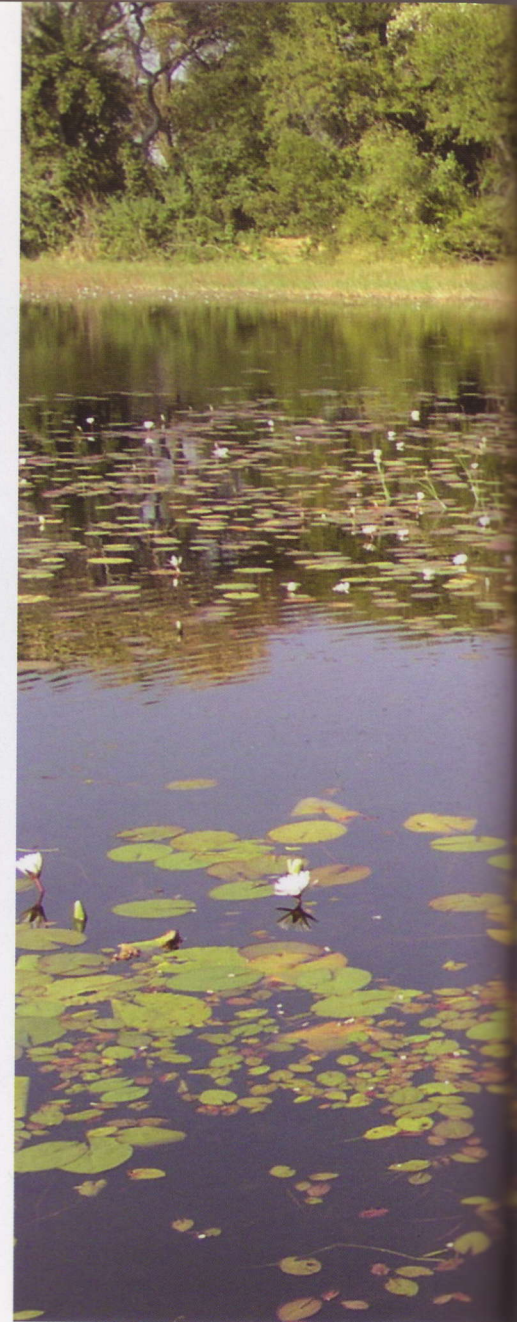
Nandipa had remained elusive for the first few days I was back; and I was hoping that today she would

come out into the open, away from the security of the thick forest. My search was assisted by the satellite radio collar fitted around her neck, which is part of the research project. As I got closer, the beeps from the transceiver got louder; my heartbeat seemed to mirror the beeps. I was beside myself with excitement. Would today be the day that I would meet Ntongine?

My patience paid off. As I rounded a woodland area, there was Nandipa with her calf, and a young male called Seba. They were walking towards a pan filled with water. When they reached the water's edge, they stopped for a drink, before bath time commenced, with mud and water flying around the place. At only five months old, Ntongine had not quite got to grips with his trunk; however he managed to give himself a good mud bath by swinging his little trunk around in the mud. All I could see was a ball of mud, underneath which was a little elephant.

Spotting a mother elephant and her calf is not an unusual sight in the Delta. However, a mother and her calf without the protection of a herd is unusual. I have known Nandipa for four and a half years, since she was a member of the captive herd at Abu Camp.

For Nandipa to have a calf in the wild is the very essence of what we are trying to achieve—proving that trained captive elephants have the capacity to



go back to their natural environments and adapt and survive in the wild.

When I first met Nandipa, I had no idea that I would be following her about in the Okavango Delta, for at that time she was destined to remain in the Abu Camp herd. In February 2002, I started a research project in NG26 (the concession area where Abu Camp is based), looking at adolescent male elephant behaviour and their transition from herd life to an adult bull's semi-solitary life in the wild.

Unlike female elephants, which remain with their natal herd for life, young males are forced out of their natal herd at puberty, and join the seemingly less social life of bull society. I had the unique opportunity



collar and monitor three young males released from the Abu Camp herd. All three males had been orphaned during culls in the Kruger National Park and had been brought up to Botswana when only 2 to 3 years old, to join the Abu herd.

The founder of Elephant Back Safaris, Randall Moore, had always hoped that he would be able to release the males into the wild, for he knew that it would be their natural instinct to leave the herd and become independent when they reached adolescent age (10 to 15 years). This instinct shows itself by

changes in their behaviour in the wild; they try to assert their independence and dominance, which can lead to confrontation with other males. These changes in captive elephants, when they reach adolescence, can lead to dangerous situations when they refuse to listen to their *mahouts* (elephant keepers).

As soon as these three males began to assert their independence, we released them. Mafunyane was the first to be released on the 1st February 2002; he is a bit of a homeboy and can often be seen around the camp. Due

*The released bull Mafunyane returns to Seba Camp for a visit.*

to the successful release of Mafunyane, we got permission to release the two other adolescent males, Thando and Seba, the following year. They were released together and have proven to be far more adventurous than Mafunyane, exploring up to 100km away from the area where they grew up.

Nandipa was a wonderful addition to the research project. It is unusual for a female to leave her herd, but the Abu herd is not a natural one. It is a group of elephants that have been brought together through circumstance. Cathy, the matriarch, was born in Uganda in 1960, captured when she was two,

**Behavioural studies have revealed the subtleties of elephant bull society.**



Learning to use the trunk.

and sold to a safari park outside of Toronto, Canada. Randall brought her back to Africa, and she starred in the film *Circles in the Forest*, along with the adult bulls Benny and Abu; the three made up the core of what would become the Abu herd.

Whilst Cathy has never had a calf of her own, she has acted as mother or grandmother to all the Abu herd. Established members of the Abu herd show new additions what to eat, where to drink, and they discipline them when they are naughty. All except

Nandipa, that is; for some reason Cathy never bonded with Nandipa, and so the close affiliation the other females feel for the matriarch and herd was missing in Nandipa.

It never posed a problem, however, as Nandipa had the other females and males her age to play and grow up with. She arrived as a calf with four others: the males, Mafunyane and Thando, and the females, Sherini and Gika – all orphans from the Kruger cull.

Nandipa started to become difficult to handle once Thando and Seba had

left; and Gika had her first calf in March 2003. Sherini already had a male calf, to whom Nandipa was a fantastic 'Auntie,' and she soon took up this role for Gika's calf.

Nandipa was very protective – often too protective, sometimes keeping the youngsters from their mothers. She seemed drawn to them and could not bear to be away from them. Could this have been jealousy? Did she want a baby of her own? Whatever it was, it consumed her, and she soon became difficult and dangerous for the

## Elephants & Permaculture at Mokolodi

BY PETER DOW

Since the inception of the permaculture project at Mokolodi in 1996, it seemed likely that it would become intertwined with the long-standing Serendip Elephant Project, also based at Mokolodi.

At face value, the two projects initially seemed to be opposite in nature, but upon further reflection, it became apparent that they could complement one another. For, you see, elephants eat the very things that permaculture gardens produce. It is well known that elephants have huge food and water requirements, being completely vegetarian and consuming mainly grasses. However, they also feed on herbs, fruits, leaves, roots and the bark of many trees and bushes found in Mokolodi Game Reserve.

On the other hand, the Mokolodi permaculture project produces vegetables, fruits, and various cereal grains for people and animals living in the reserve. It utilises tried and tested "natural" agricultural methods that are working, as anyone who has visited will attest – the gardens are verdant and full of healthy looking vegetables and fruit trees.

The question then arises – how can the two projects benefit each other? The answer is simple. Since permaculture needs good soil in order to efficiently produce high yields of vegetables and fruits, it requires humus. Where does it get this fertiliser? It comes from the elephant bolus (faeces) found in abundance in Mokolodi.

Elephants only digest about 40 percent of the vegetation they eat. This means that their bolus is high in nutrient content, while still being rich in humus. The bolus

makes a wonderful base for nutrient rich soil.

Avid gardeners have tested the elephant bolus, applying it liberally to flower and vegetable gardens. The results were impressive; the roses flowered larger and with more vibrant colours, while the vegetables grew bigger and even tasted better.

Likewise at the Mokolodi permaculture project; boluses were applied to the soil, and not surprisingly, bigger and better yields of vegetable and fruits were produced. Because the normal yield was improved, an excess of fruits and vegetables were produced. It was only natural, then, that some of the fruits found their way back to the elephants' dinner table, thereby completing the 'I help you and you help me' cycle.

Today, the permaculture project produces its own soil through composting material obtained solely within the confines of the reserve, still relying heavily on elephant boluses for its humus/organic supply.

The elephant boluses are also used at an Otse community based project called Botlhale Jwa Phala; they are added to recycled paper to make "natural" paper products.

Other uses include:

- The bolus can be gently burned to produce a smoke that acts as an effective mosquito coil.
- The bolus can be vigorously burned as a fuel for cooking, or it can be used to make methane gas in a biodigester; the methane gas is then used as a clean burning fuel.
- The bolus, once soaked in water, can produce a substance that is used to tan animal skins.
- The bolus is sometimes used in art pieces (paintings and sculptures).



*mahouts* to handle. She increasingly became aggressive towards them and the other elephants. It was clear to see she was unhappy and in turmoil about something. In the end Randall decided that we should seek permission to release her, and see if her being free would calm her, and create the right conditions for her to have a calf of her own.

Nandipa's release provided an opportunity to study instinct and learnt behaviour in female elephants, and to see if a wild herd would accept her. The Department of Wildlife and National Parks saw the value this could offer to our understanding of elephants, and gave permission for her release. In September 2003, Nandipa was fitted with a satellite radio collar and was free to leave the Abu herd. Her release and the arrival of Ntongine has turned her back to the peaceful, independent female we all know and love.

Alongside the five released elephants, five wild adolescent male elephants were collared; and they have shown us the importance of certain habitats to the elephants of the Delta, as well as the vast areas the Delta elephants require for survival.

Behavioural studies have revealed the subtleties of bull society, the importance of older males in the continued development of adolescent males, the affiliation certain males have for each other, and the significance of adolescence in the long-term development of bull elephants. All of this helps us to understand male elephants a little more. A deeper understanding of males may enable us to combat some of their less endearing behaviours, such as crop raiding.

Now in its fifth year, the elephant research project based in NG26 is looking to expand its areas of interest to study all aspects of adolescence in the male elephant, including chemical and audible communication.

A Charitable Trust is currently being set up to support this work; it will include a scholarship fund to enable Botswana students to carry out postgraduate research within the realms of the project, and to expand our understanding of these majestic, magnificent animals.

The major findings of our research to date include the following:

- Adolescent males are more social than males in other age-classes, exhibiting

#### *Locked in a playful encounter.*

- higher levels of social behaviour; they were sighted in larger social groups.
- Adolescent males have a preference for being closer to other elephants than other age classes, and in particular being closer to older males.
- Old bulls have a very important role to play in male elephant society.
- Adolescent male elephants in the Okavango Delta do not have a distinct home range, utilising an area bigger than most other African elephant populations.
- The flood season of the Okavango Delta affects the habitat type the elephants utilise, the area of land that they utilise, and the daily distances that they travel.
- As the time of post release increases, the released elephants become more integrated into the wild elephant population.
- Released female elephants can be accepted and integrated and will move with wild females and mixed herds.
- Socialising with known individuals is important to elephants, as indicated by the time the released elephants spend socialising with each other. ⊗