

zebra surprise



A herd of zebras – or any other large herbivore – may be here one day, gone the next. Where do they go? With the aid of satellite tracking, researchers are beginning to find out and, reports **John Hanks**, the animals' movements are bolstering the case for TFCAs.



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FIFTY YEARS AGO ON A COLD and miserable winter's day in England I was enthralled by a book that had just been published: *Serengeti Shall Not Die*. Bernhard and Michael Grzimek's account of the extraordinary annual migrations of a million or more wildebeest accompanied by 200 000 zebras became a classic, firmly establishing the Serengeti as the flagship of Tanzania's tourism industry. It also pointed me in the direction of a career in conservation in Africa.

I have subsequently retained an interest in the migration of large mammals and when I first started working on the establishment of Transfrontier Conservation Areas (TFCAs) in 1997, the 'restoration of large mammal migration routes' between neighbouring countries was used as one of the biological reasons for setting them up. The objective sounds simple, but it has resulted in a certain amount of confusion because, surprisingly, there is no universally accepted definition of the word 'migration', particularly when it is applied to large mammals. Strictly speaking, migration occurs in response to changing seasons and is *predictable and repeated each year*, with the animals returning to where they came from – as happens in the Serengeti.

An equally important reason for establishing TFCAs is to allow for unhindered dispersal, or the movement of animals out of an area and into a new range. This may take place for a variety of reasons, and the animals may not necessarily return to where they came from; if they do, the movement is neither predictable nor seasonal.

With Africa's human population still on the increase, protected areas being

encroached upon and the land adjacent to them being irreversibly transformed, options for dispersal to take place or migration routes to be restored are fast disappearing. This makes a strong argument in favour of accelerating the development of TFCAs before it is too late.

One of the best examples of the very real potential of TFCAs to make a major difference to both dispersal and migration is the 444 000-square-kilometre Kavango–Zambezi TFCA, which links parts of Angola, Namibia, Botswana, Zambia and Zimbabwe. In pioneering research, Elephants Without

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Borders (EWB; www.elephantswithoutborders.org) has recorded and mapped the dispersal of elephants from Botswana north into Zambia across Namibia's Caprivi Strip and even into Angola. The team has recently expanded its projects to include other large herbivores (see 'View from the top' in *Africa Geographic* August 2011), initially looking at the zebra population on the western floodplains of Botswana's Chobe River which, according to EWB's dry-season aerial surveys, numbers close to 3 000 animals and is increasing.

Although conservation staff have worked in and around this area for many years, the seasonal movements of its zebras were unknown. To remedy this, three zebras were fitted with satellite collars in August 2012. The EWB team observed that during the dry season the herds were on the Chobe

The satellite tracking of zebras in Botswana's Chobe region and Namibia is turning up a few revelations for researchers.

floodplains and moved 15 kilometres north into Namibia's Caprivi Strip before returning south to Chobe National Park at the start of the rains. Two of the collared animals then travelled south-eastward to the Seloko Plains region while the third trekked an astonishing 240 kilometres in a straight line south to Botswana's Nxai Pan National Park.

'This new cross-border zebra route has never been mapped,' says EWB's Michael Chase. 'It's a major conservation finding at a time when long-distance movements are being lost around the world.'

A researcher working in Namibia, Robin Naidoo, has also recently collared zebras and recorded the same straight-line movement to Nxai Pan. If these animals do indeed return from the south to Namibia on a regular seasonal basis, they could be completing one of Africa's longest transboundary mammal migrations. This is an exciting discovery at a time when some of the initial euphoria linked to TFCAs and their potential to make a difference has started to diminish.

Says Chase, 'It's astounding that we are still discovering phenomenal biological events that we knew nothing about. It goes to show how vital systems require ongoing monitoring, as wildlife is diverse and adapts to habitats that are continually transforming as a result of human disturbance, climate change and other environmental conditions.'