By Kelly Landen

**Aerial survey provides good and bad news**

Elephants Without Borders (EWB), with the support of Botswana’s Department of Wildlife and National Parks, recently completed flying a major aerial survey counting wildlife species throughout northern Botswana.

The project was led by EWB’s founder, and San Diego Zoo scientist Dr. Mike Chase, coordinated by EWB’s program manager, Kelly Landen and piloted by Mike Holding from Afriscreen Films. The survey took nearly 250 hours of flying time, a flight line total of 25,598 km, covering a total of 73,478 km², which included the National Parks of Chobe, Makgadikgadi, Nxai Pan, Moremi Game Reserve, the Okavango Delta and the surrounding Wildlife Management Areas in the Ngamiland, Chobe and Central districts.

The survey’s sampling intensity averaged 20% in comparison to previous surveys and is the first independent fixed-wing aerial survey to provide concession level estimates for wildlife populations in Botswana.

Wildlife species counted included: elephant, roan, sable, zebra, giraffe, gemsbok, eland, kudu, impala, tsessebe, springbok, buffalo, tsessebe, hartebeest, warthog, wildebeest and hippo. The team also recorded observations of selected large birds: wattled crane, ground hoobill, saddle-bill stork, fish eagle, lappet-faced vulture and batrachian.

Baobab trees were assessed with note taken of size and possible damage. Elephant carcasses and homes were recorded, as well as additional notes on environmental conditions such as bush fires and the structural integrity of fence lines. In the tribal grazing areas, cattle were also counted.

Botswana conducted its first systematic aerial survey in 1993 followed by seven subsequent surveys, lastly in 2004. The new data allows for a comparative analysis of wildlife distribution, abundance and trends over time.

Some of the results were unexpected. Astonishingly, numbers of animals in northern Botswana have halved substantially within the last 15 years. In Ngamiland there has evidently been a district wide halving in the abundance of giraffe, kudu, lechwe, roan, muntjac, tsessebe, and warthog.

However, in the Chobe district, there has been a very different trend. The wildlife populations within Chobe have remained fairly stable. In 1996, elephant numbers in northern Botswana have remained at a constant 130,000 since 2003. Wildlife declined by a staggering 90%, and remain at a small fraction of their past numbers.

In Ngamiland, wildlife species (sable, kudu, eland) have remained similar while in the Chobe district, there has been a very different trend. The wildlife populations within Chobe have halved substantially within the last 15 years. The exception is elephant numbers which in northern Botswana have remained at a constant 130,000 since 2003. Wildlife declined by a staggering 90%, and remain at a small fraction of their past numbers.

Since then, elephant numbers have remained similar in Chobe, as well as buffalo, giraffe, kudu and zebra. There has been a slight decrease in roan and ostrich estimates. However, sable and tsessebe numbers have doubled; eland and tsessebe have tripled; impala and warthog are now ten-fold; and hippo number in the hundreds.

It was noted that woodlands species (sable, kudu, eland) have shifted from Chobe National Park into the Chobe Forest Reserves, likely due to the habitat change along the riverfront.

Throughout Africa, land use, habitat fragmentation, vegetation changes, drought effects, vegetation fires, fences and poaching have been cited as contributing factors to the decline of wildlife. However, as this study shows, conservation management requires a good understanding of wildlife population dynamics and reliable estimates of population densities. It is places such as Chobe that people visit to experience Africa’s beautiful scenery and plentiful wildlife, to be treasured and protected for future generations.

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