



Above: Trees destroyed by elephants, a common occurrence in northern Botswana

LEADING BY EXAMPLE

Elephants Without Borders takes an abrupt left turn – moving from wildlife research to a community outreach project that aims to mitigate human/elephant conflict in northern Botswana. By Linda Pfothenauer. Photos by Kelly Landen

“I’ve always said the elephants would show me where EWB should go,” quipped Dr. Michael Chase, Elephants Without Borders director, referring to the NGO’s latest venture. The Elephant Conservation and Community Outreach Farming Project, in operation since January, 2010, focuses on low-cost, sustainable human/elephant mitigation measures in a now thriving pilot project at Kachikau tribal lands, in the Chobe Enclave in northern Botswana.

Human/elephant conflict is on the rise in northern Botswana, but particularly in Chobe District, as human settlements – with their accompanying agricultural fields and livestock – expand.

Elephants regularly frequent towns, villages, and farmlands, sometimes leaving a trail of destruction – eaten and felled trees, eaten and damaged crops, torn down fencing, pulled up water piping. Farmers, often having access to firearms, respond by killing the elephants, which they are al-

lowed to do by law if the animal is posing a threat to human life.

“This year alone, 26 elephants in the Chobe enclave were shot by farmers, due to human/elephant conflict. Three collared elephants that were being monitored by EWB researchers have been shot by rural villagers,” said Mike.

Additionally, elephants are having a huge impact on the vegetation of some areas in northern Botswana, including the Okavango Delta, where their numbers are on the rise. At the Chobe Riverfront, in particular, there has been a 60 per cent decline in baobab trees, and sycamore, mongongo and acacia trees are on the verge of extinction. “Clearly we need to look at ways to mitigate elephant impact on mature riparian forests,” said Mike.

Some elephant populations now utilising the resources of northern Botswana originally came from southern Angola, having fled the civil war there; and they are now moving back to their ancestral homelands.

However, the wildlife corridors that EWB originally recommended to ensure their safe passage back to Angola, and to give other elephant populations more space and greater ranges to follow an-

cient migration routes, have not been implemented. And, local land boards continue to allocate land that had initially been identified to be set aside as elephant corridors.

“As we are speaking, we are losing more and more of these corridors to human encroachment. There is an urgent need to come up with a comprehensive management plan for elephants and forests– across borders. We have very little time left,” asserted Mike.

The EWB project addresses these critical issues, driven, Mike emphasised, by the elephants themselves “telling us where we need to direct our project and where we should be going.”

Primarily funded by the Ministry of Wildlife, Environment and Tourism (MEWT), the Department of Wildlife and National Parks (DWNP), the San Diego Zoo and private individuals, the project has set up trial plots at Kachikau tribal lands. It will provide training to farmers in improved agricultural methods more specific to the Botswana environment – smaller fields giving higher yields (20 m by 20 m rather than the conventional full hectare), and more productive farming techniques, hence greater food security.

The farmers are also educated and sensitised to the complexities of human/elephant conflict, the need to stop cutting down trees to create farmland, the urgency of habitat conservation, and ways to deter elephants from entering their fields. These include using chili peppers and paprika to repel elephants – they detest the smell and irritating qualities of both; building hedge buffers with reeds or acacia to keep elephants out of the fields, planting eggplant or other crops less palatable to elephants in buffer zones –and the erection of more effective fencing.

Elsewhere in Africa and the world, chili peppers as elephant repellants have not been found to be viable in the long-term, as growing them is labour intensive and requires a lot of water, certainly not appropriate for Botswana’s semi-arid climate.

EWB is collaborating with experts from Zambia, Sri Lanka and the San Diego Zoo, USA to establish more innovative methods of addressing these problems. Zambia has been quite successful with certain methods of conservation agriculture – better crop production on smaller fields, and promoting indigenous agriculture.

Sri Lanka – with its cultural respect and reverence for elephants–has implemented projects that combine new farming methods with mitigating human/elephant conflict.

And, perhaps most intriguingly, researchers from San Diego Zoo, California, USA will come to Botswana to record and interpret wild elephant infrasound communication, inaudible to humans. What, for example, are distress calls? How do elephants tell others to stay away from – or come to–certain areas? What indicates danger, or, a desired location?



Pioneered at San Diego Zoo, it is the first time this is being done in the wild. If successful, the interpretation of elephant communication could assist farmers; they could be given recordings that tell elephants to stay away from their fields, without resorting to violence or killing.

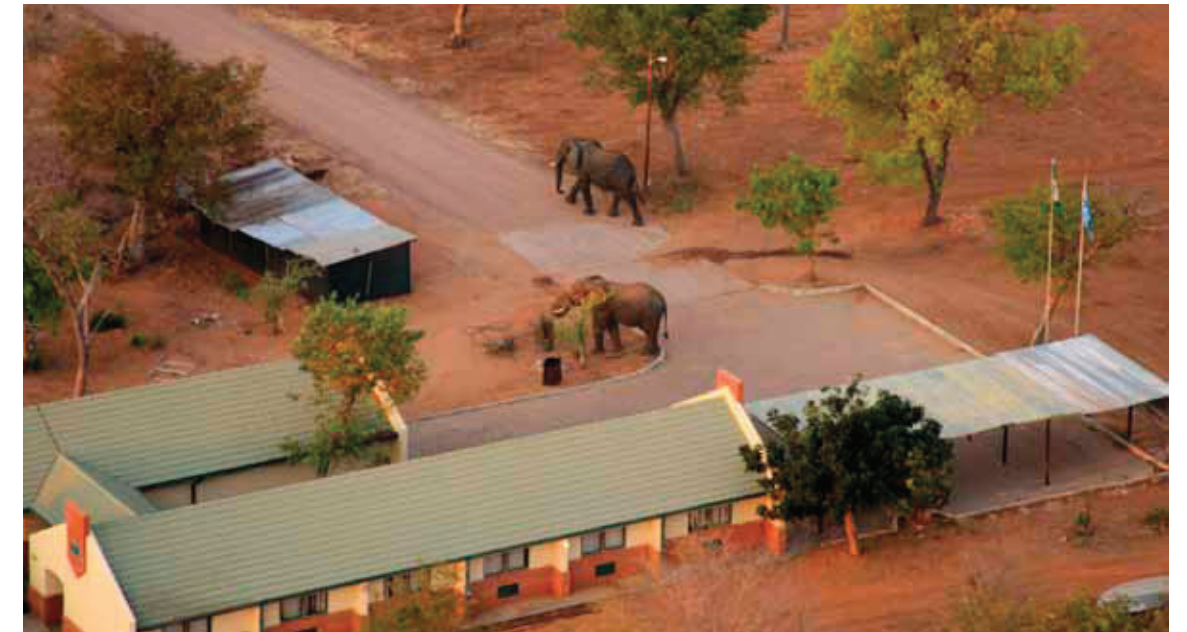
To be sure, traditional local attitudes towards elephants come into play here; many Batswana perceive elephants as dangerous crop-raiders and killers, something to be rid of; often retaliation killing takes place. These perceptions and behaviour can only change with education, positive experience and time.

"It would be satisfying," said EWB programme manager Kelly Landen, "to see communities having a perception change towards conservation in general, realising that you don't need to have a big farm to get a high yield, or you don't need to cut down large trees to plant a field, or you don't need to kill elephants that come near your farm. It is all about empowering the people wisely." ■

Left: A Kachikau farmer is happy about the maize seeds he will plant. Below: Preparing letaka reeds for use in fence making.



In Northern Botswana, elephants frequently walk through human settlements and towns, as depicted here near the DWNP offices in Kasane.



AERIAL SURVEY

EWB, with the support of the DWNP and the San Diego Zoo, completed late last year an aerial survey counting elephants and wildlife species over northern Botswana.

Led by EWB's founder and director, and San Diego Zoo scientist, Dr. Mike Chase, coordinated by EWB's programme manager, Kelly Landen, and piloted by Mr. Mike Holding from Afriscreen Films, the survey team flew approximately 250 hours, in a small, single engine plane, over a three-month period, to complete the survey. The distance covered was approximately

42 000 kilometres—a distance greater than the circumference of the Earth at the Equator! The study area essentially encompassed the entire elephant range in northern Botswana, approximately 115 800 km sq kms. The southern boundary extended across the southern extent of the Okavango Delta, following the Southern Buffalo Fence, eastward to the Boteti River; the eastern boundary extended to the Zimbabwe border, then north to Kasane. The northern boundary followed along the Chobe, Linyanti and Kwando Rivers.

Over high density wildlife areas, such as the Okavango, the sampling coverage was about 22 percent, the highest survey coverage ever flown over such a vast area of northern Botswana.

Wildlife species counted included: large and small herbivores, such as elephant, roan, sable, zebra, giraffe, eland, kudu, impala, lechwe, springbok, buffalo, wildebeest and hippopotamus; predators were also noted when seen.

Types of elephant herds, elephant carcasses and bones were recorded.

Selected large birds, and nesting sites, were also recorded. The birds counted included: Wattled crane, Ground hornbill, Saddle-bill stork, African fish eagle, Lappet-faced vulture and Bateleurs.

Baobab trees were counted and notes taken of their size and possible damage. Additional notes were made on environmental conditions, such as the extent of bush fires and the structural integrity of fence lines.

The information on elephant and wildlife numbers, distribution, movements, and demographic characteristics will be incorporated into population models to better understand a variety of research and management questions relating to wildlife ecology and conservation management in Botswana.

Survey data will also contribute to management issues including trans-boundary co-operation that addresses illegal hunting, veterinary control measures, hunting quotas and population monitoring.

The results of this project will also help promote conservation efforts that seek to ultimately enhance economic opportunities for rural communities in the region.

An official launch, presentations and meetings will be held to share information obtained from this study and from the on-going research activities of EWB – in order to identify priority areas for wildlife corridors, and to develop strategies for promoting wildlife conservation in the region.

For more information, contact www.elephantswithoutborders.org