

Quarterly report January 2009

The ecology of the African buffalo (*Syncerus caffer*) in the Okavango Delta, Botswana

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In October 2008, I obtained a permit to dart and collar nine (9) buffalo cows (Ref: **WP/RES 15/2/2 (17)**). Peter Perlstein from Okavango Helicopters was hired, together with Dr. Larry Patterson of Kalahari Game Services, to carry out the darting. Four animals were darted on the Santantadibe on the 13th October and a further five cows were darted on the Gomoti on the 14th October. I sent through a report with further details on the dartings shortly after they took place.

The collars that were fitted were two (2) satellite enabled GPS collars and seven (7) GPS store on board collars. All of the satellite collars (now six in total) have been transmitting regularly and without problems. The GPS store on board collars cannot be monitored as closely, since they do not transmit their positions in the same way as the satellite collars. Whenever I have been out to collect data from the satellite collared herds, I have also tracked for the GPS collared animals. I found most of them at some point during the end of the dry season, but have only managed to find one of them since the start of the wet season. I usually have access to an aircraft from which to track these animals, but the plane is currently in South Africa being serviced and is unlikely to be available again before the end of January. As soon as it returns, I will be sure to find every collared animal. Until then, I will continue to track for the GPS collars.

In November 2008, the four cows bearing satellite collars on the Gomoti (B73, 74, 76 and 77) were all seen to perform a small scale migration, moving from areas dominated by floodplains to areas dominated by mopane woodland. B73 and B76 were in one herd when they migrated, as were B74 and B77. The collar B74 had a slight glitch for the few days around the migration, so that I was unable to recover all of the fixes, and was only able to verify that the cow was in the same herd as B77. One of these herds moved approximately 50 km in 14 hours and the other moved approximately 30 km in 11 hours. Both movements were relatively linear.

Figures 1 to 4 show the fixes taken by these four collars between the 1st October 2008 and the 1st January 2009. The red symbols represent their locations on the 1st January 2009.

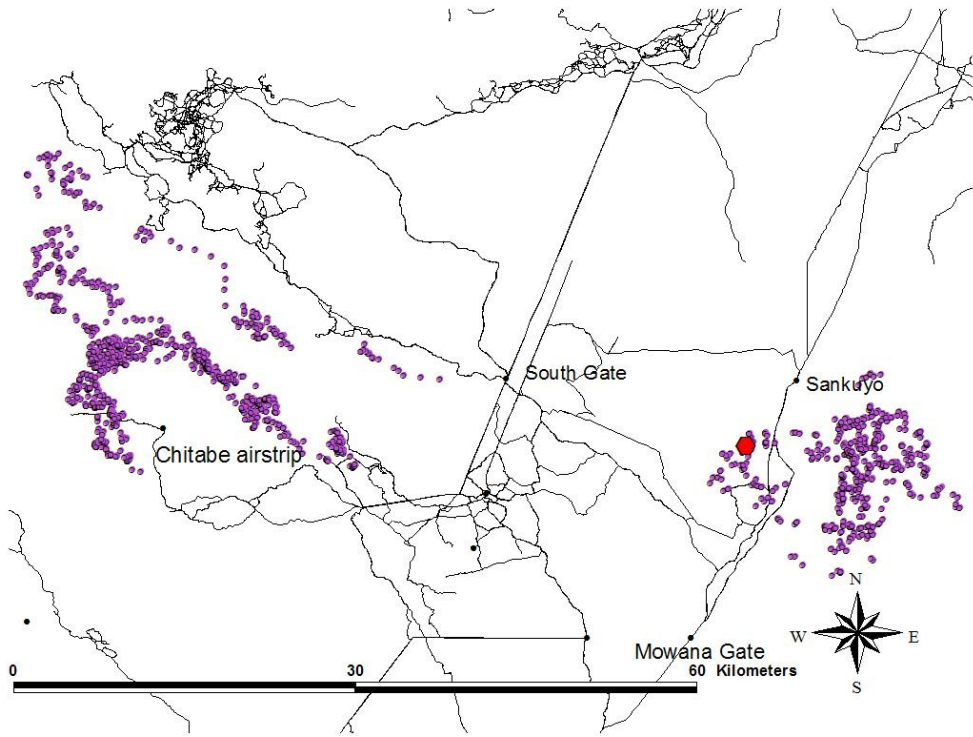


Figure 1: Fixes taken by collar B73

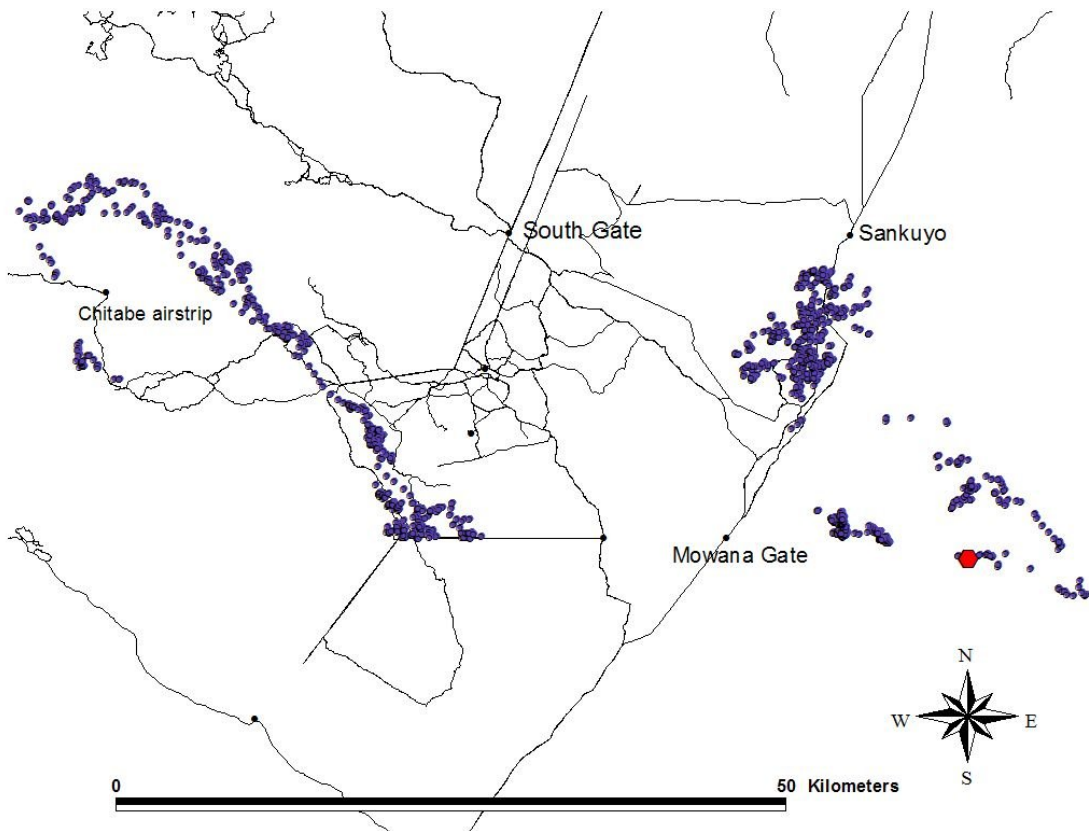


Figure 2: Fixes taken by collar B74

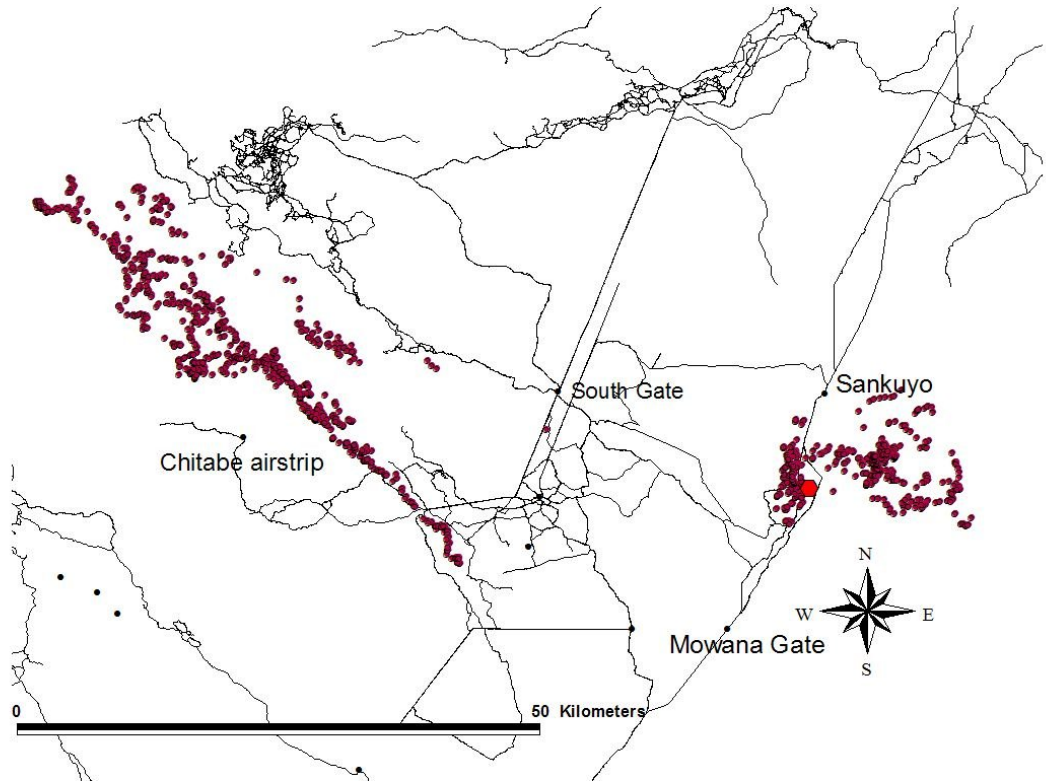


Figure 3: Fixes taken by collar B76

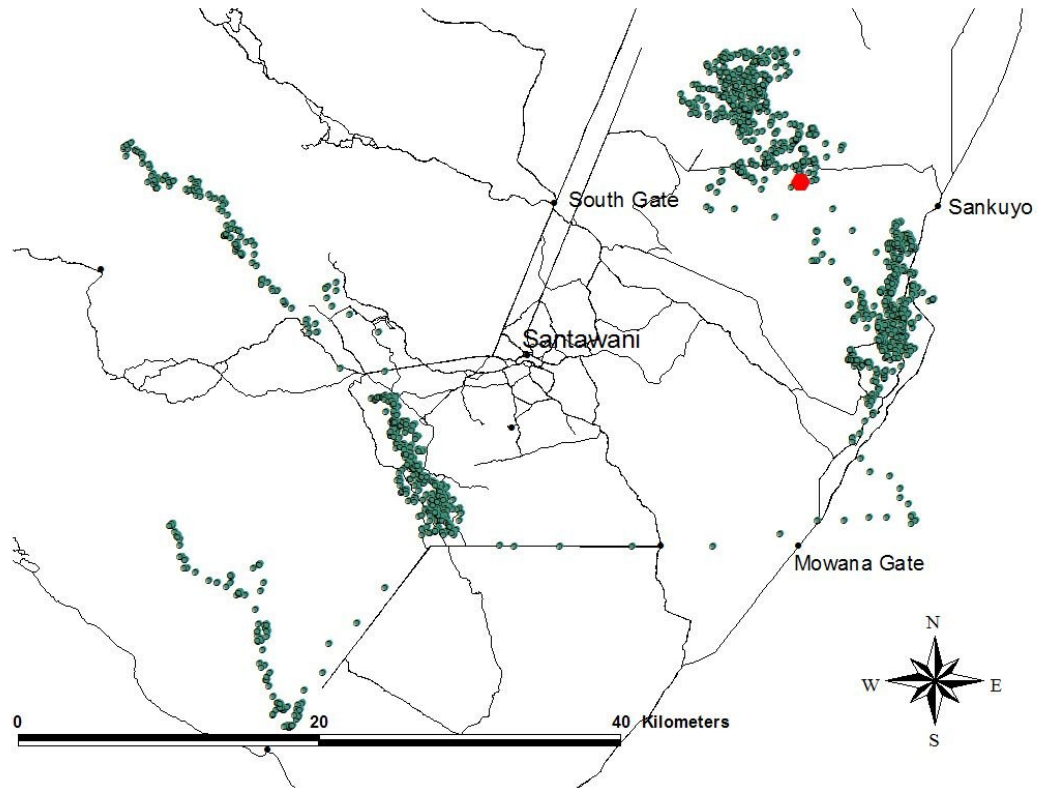


Figure 4: Fixes taken by collar B77

I was able to follow the routes taken by these herds shortly after the migration occurred. I sampled several locations used by the herds before they migrated, most of the locations that they walked through along the migration route, and several sites where they grazed at the end of the migration.

These collars have all been found in separate herds since the end of the migration movement, although they have been using the same general area.

The cows that are based in the Santantadibe area have not shown any pronounced migration patterns. They have changed their patterns of habitat utilisation since the beginning of the rainy season, mostly abandoning the areas of floodplain to concentrate on grassland areas with some mopane woodland. These habitat types are adjacent to the areas that they were using during the dry season, so they have not migrated to new locations. However, it is interesting that, in the same manner as last year, the Gomoti herds have moved east and the Santantadibe/Stanley's herds have shown no obvious migration pattern. The fixes taken by these collars are shown in figures 5 and 6. Again, the time period is from the 1st October 2008 to the 1st January 2009 and the red symbols represent each herds location on the 1st January 2009.

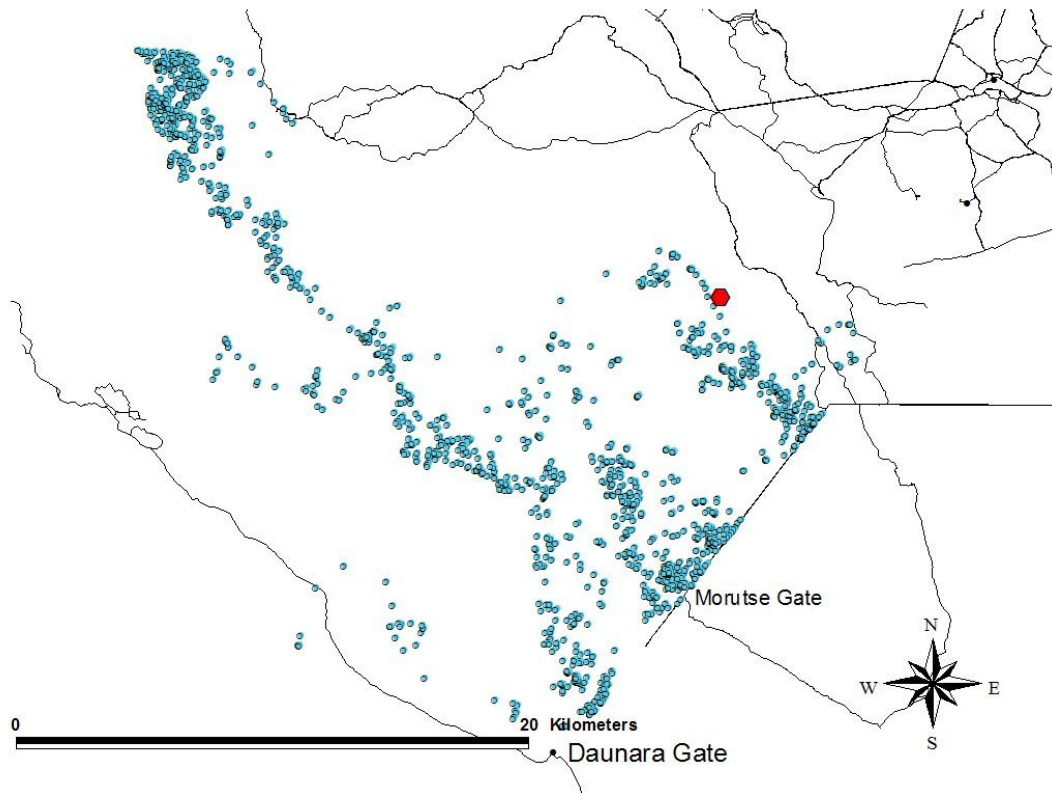


Figure 5: Fixes taken by collar B75

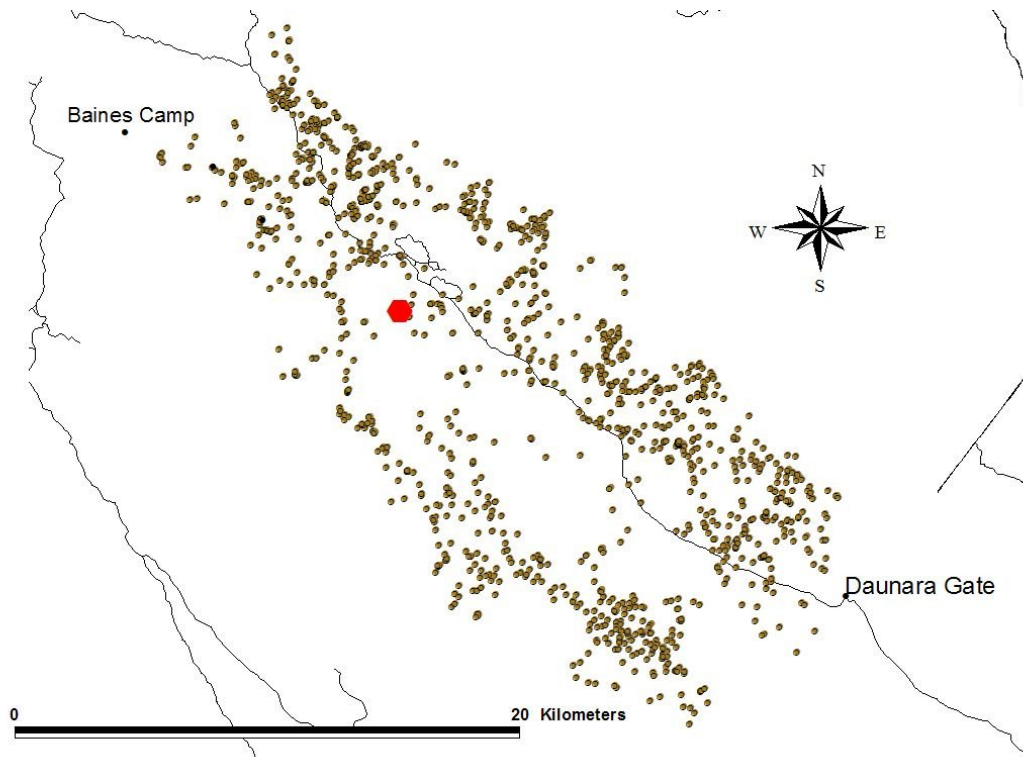


Figure 6: Fixes taken by collar B78

For all of the herds, there has been a definite transition between the habitats used in the dry/flooding seasons and those used during the wet season. According to the seasons that I have defined, we are still only one month into the wet season, so there are many more data to collect before they can be analysed to give conclusive results.

I have been continuing to collect grass samples from sites used to different extents by buffalo herds, as well as faecal samples and population dynamics. During the last season, I was able to collect grass samples from ten of each activity/habitat site class, faecal samples from 14 herds and population dynamics data from over 2,500 animals. I hope to be able to obtain similar sample sizes during the wet season, although the herds are often in very dense habitats, so population dynamics may be more difficult than previously.