



**ANAC**

ADMINISTRAÇÃO NACIONAL  
DAS ÁREAS DE CONSERVAÇÃO

OCTOBER 2018



# ZAMBEZE DELTA ECOLOGY

*Holistic Ecological Research Project*



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# MONTHLY COLLAR DATA REPORT



## OCTOBER 2018: FOCUS ON ELEPHANT

*In October 2018 we were granted permission to collar an additional 2 elephants, increasing our sample size to 6 individuals.*

Elephants *Loxodonta Africana* (and many other species) throughout Africa are coming under increasing pressure from both the illicit wildlife trade and conflict with humans over ever-dwindling resources; conservation research initiatives of this type are crucial to better understanding the species' behavioural ecology on a local level and facilitating informed and strategic wildlife management.



*This elephant was poached several years ago. Given its remote location and harsh environment, there is relatively little elephant poaching in the Zambeze Delta compared with other areas in Africa.*

As environmental engineers, elephants are keystone species that positively influence the entire natural ecosystem; and as such they are definitely deserving of our attempting to better understand their behavioural ecology so as to be able to effectively manage them.



## ELEPHANT BEHAVIOURAL ECOLOGY VARIATION

All of the tagged elephants tracked by our project were collared on the Coutada 11 floodplain. These elephants seem to have a very narrow ecological niche – they do not leave the floodplain/swamp area nor spend any time in the ecotone or forest habitats. We estimate that the total population size of elephant in this system is approximately 400-500 individuals.

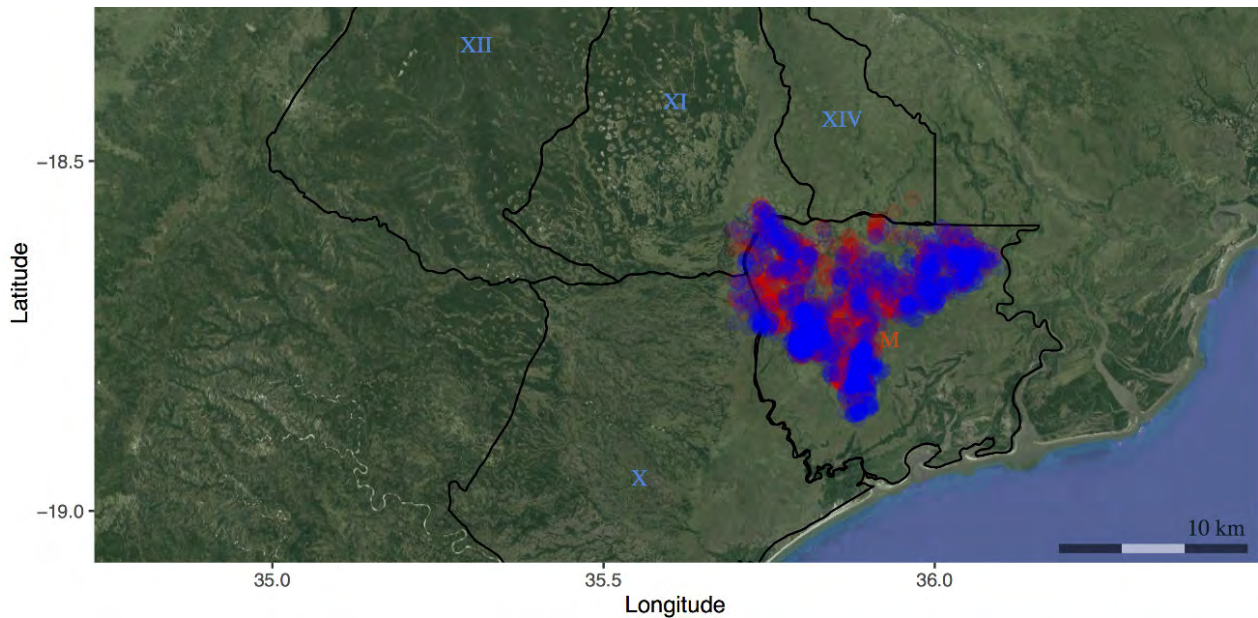


*A family group of Zambeze Delta floodplain/swamp elephants with a large ration of young elephants indicating a healthy population*

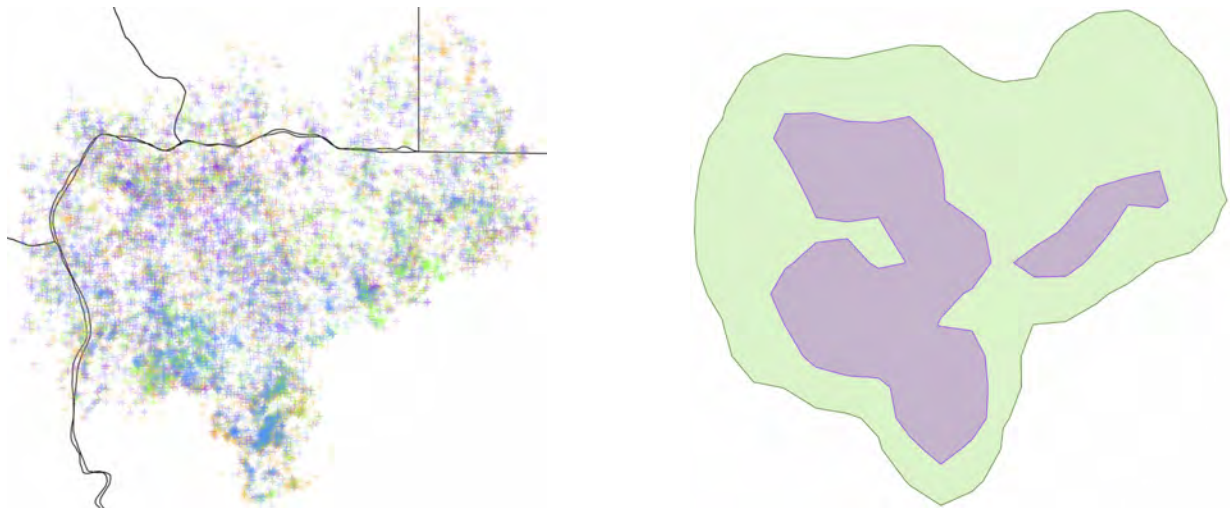
There is also a population of elephants that lives in the forest, though these animals are rarely seen and very little is known about their habits and behaviour. It is possible that they too spend some time in the swamps – but given that the swamp elephants never enter the forest, it is unlikely that the forest animals enter the floodplain system. Future research efforts could plan to incorporate this subpopulation so as to improve the level of overall knowledge regarding local elephant behavioural ecology, and possibly improve conservation effort efficiency.



# ELEPHANT COLLAR DATA OVERVIEW



*This range map represents 12 months of collardata for 2 different groups of elephants in the Zambeze Delta ecosystem. The points were plotted as semi-transparent dots so that the areas of most frequent use are highlighted; note the extensive overlap of these groups*



*The graphic on the left displays the point location data for 4 collared elephants; The graphic on the right represents the 50 (core; purple) and 95 (range; green) percent kernel utilisation distributions*

The average elephant range (95% kud) is 1136.4 [ $\pm$  28.5] km<sup>2</sup>; and the average core area utilised (50% kud) is 363.7 [ $\pm$  17.1] km<sup>2</sup>

*Next Month:*  
**FOCUS ON THE LION DATA**

