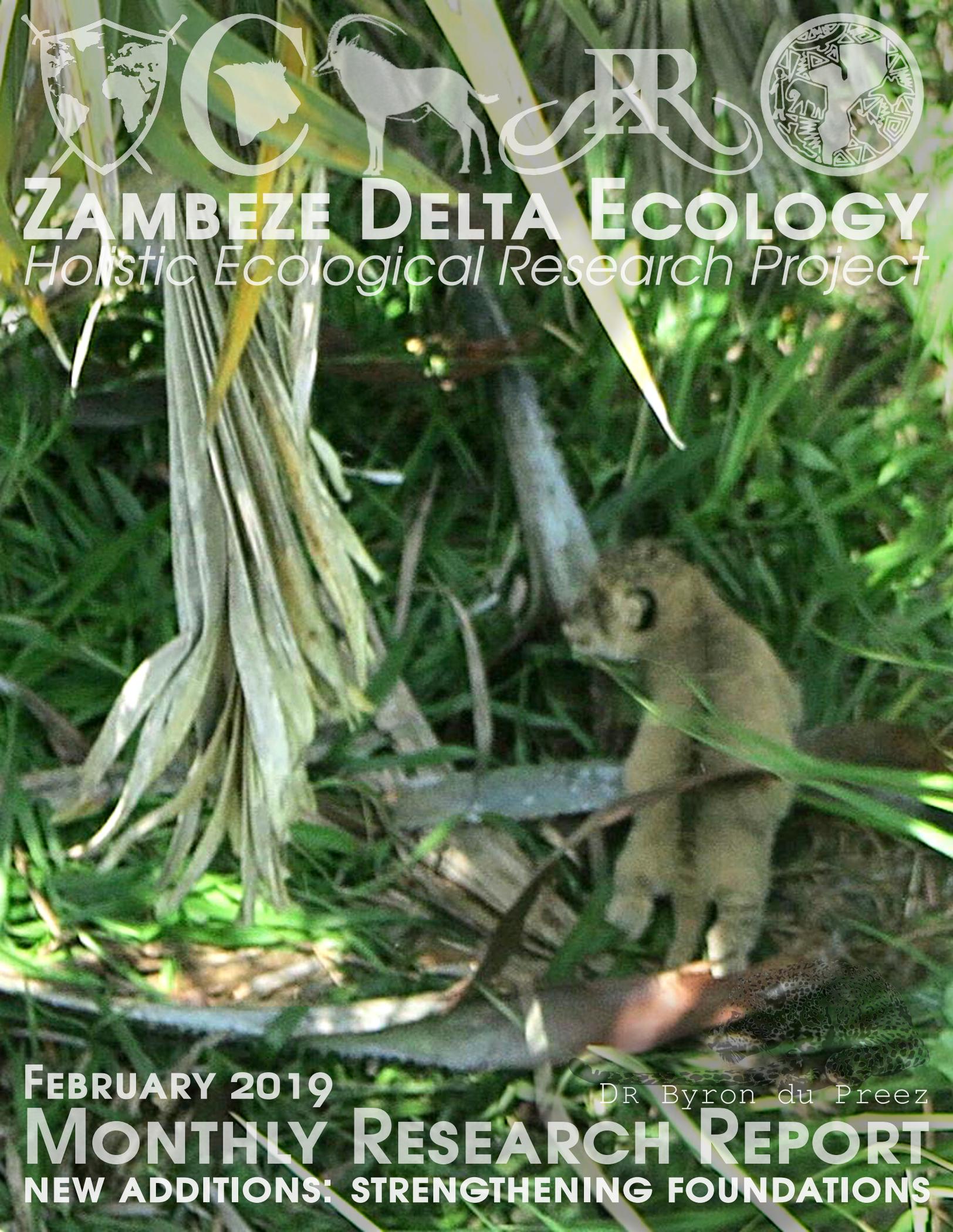




ZAMBEZE DELTA ECOLOGY

Holistic Ecological Research Project



FEBRUARY 2019

DR Byron du Preez

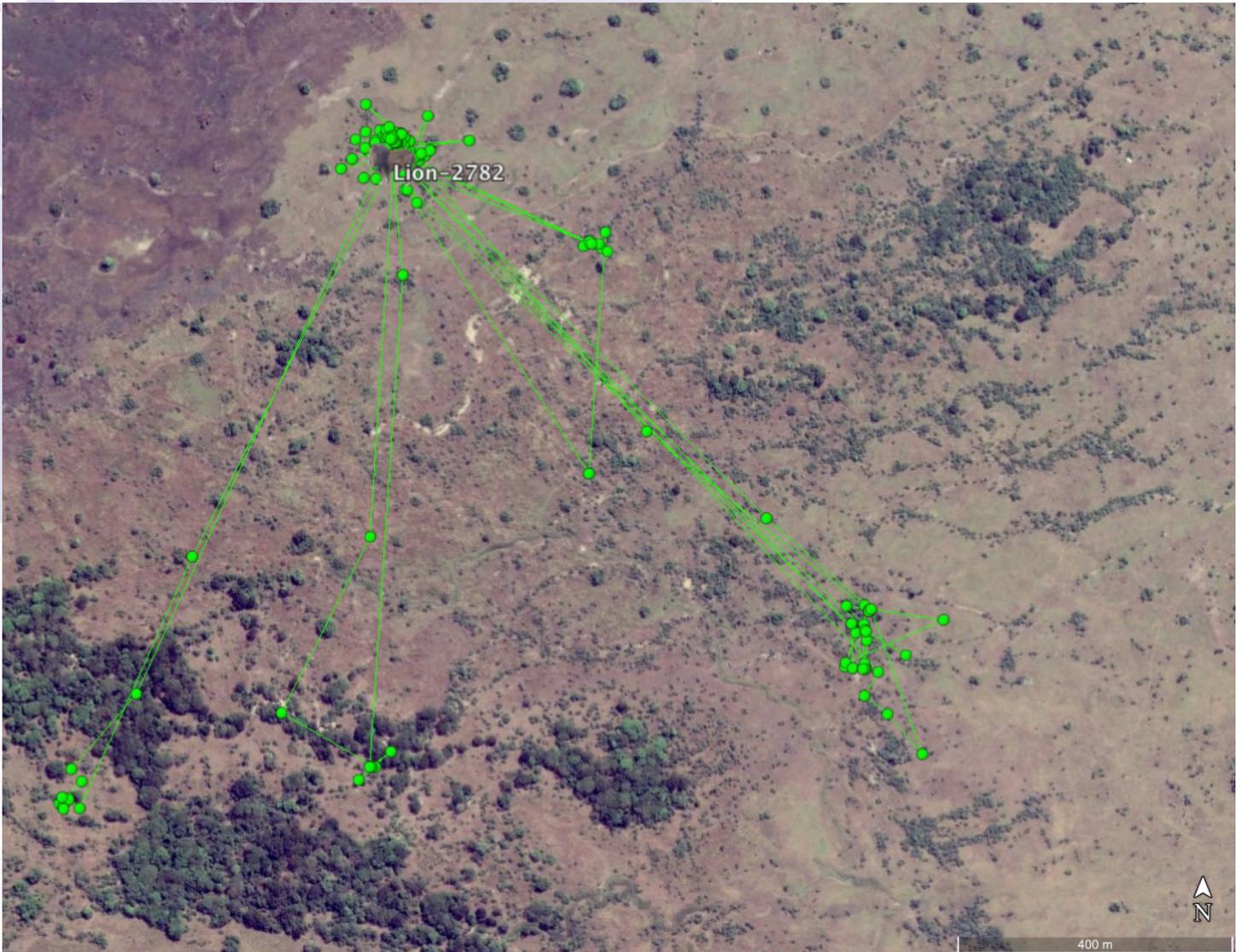
MONTHLY RESEARCH REPORT

NEW ADDITIONS: STRENGTHENING FOUNDATIONS



THE NEXT GENERATION OF DELTA LIONS

February got off to a fantastic start with the confirmation of healthy cubs from at least two females so far; and behavioural extrapolation to the other females suggests that there could be several more that either have cubs or are close to giving birth.



Typical collardata pattern of a lioness with small cubs – frequently leaving from and returning to the exact same point. This is a type of data signature that indicates specific activities and behaviour.

The first few weeks after birth is a critical period for the young families – the mothers split off from their prides before parturition, and remain alone with their new cubs for a significant period afterwards, allowing them time to form the close bonds that characterise lion society.



Lioness moving small cub from one den to another. Whilst even difficult to spot from the air without causing disturbance, they are impossible to monitor from the ground at this time of year due the dense vegetation.

At this point in the wet season, the Zambeze Delta floodplain is inaccessible by vehicle on the ground, as the ground is soggy and the vegetation dense; the cubs were spotted by helicopter, and for obvious reasons we have backed off from close monitoring of these females for the time being – at least until their satellite collar-data indicates that they have reunited with the prides; and when they are settled and ready to introduce their cubs to the world we will continue the close monitoring efforts. We believe that there are at least five small cubs so far, and many more to come.



LOCAL LIONS SETTLING IN AS RESIDENTS

On the topic of cubs, one of the local males who has settled into the area since the introduction of the lions has been seen increasingly frequently. He was recently spotted with *Lioness 2782*, one of the females confirmed to have cubs, and therefore there is good reason to believe that he is the father.



Local male lion who we believe is the father of several of the litters.

This is fantastic news on several levels. Firstly, the genetic diversity, including local adaptations, introduced to these cubs will improve the survival rate and natural fitness of the population. It also confirms our hypothesis that the reintroduction of territorial dominance and defence would in fact attract and anchor the vagrant individuals in the area. There are at least two, possibly three, local males that have settled in, and we suspect that there may be some females, though we are yet to confirm this absolutely. One of the exercises planned for later this season is a predator camera-trap survey in various habitat types within the ecosystem. *Watch this space!*



WELCOME THE NEW FIELD RESEARCH ASSISTANT

We'd like to formally introduce and welcome our new field assistant, Andres 'Beto' Hayes, to the research team. Andres came to Coutada 11 for unpaid work experience in 2018, but showed such an affinity and natural ability for field work that we brought him on board to assist with the monitoring and record keeping of all of the various collared animals that make up the holistic ecological research project. This is a time-consuming job, and we appreciate Andres' patience and natural intuition for animal behaviour.



Andres in a typical pose – tracking lions from the helicopter.



LION POPULATION SUMMARY: FEBRUARY 2019

- 24 lions (*Panthera leo*) introduced (August 2019)
- 19 lions satellite collared (August + December 2019)
- 1 lion poached (September 2019)
- ~ 3 male and 2 female local lions since detected (since September 2019)
- 5 new cubs detected (February 2019)

COLLAR-DATA STATISTICS: FEBRUARY 2019 UPDATE

- 211.8 m – lowest daily distance moved in Feb 2019 (female 3071)
- 11800.0 m – highest distance moved in Feb 2019 (female 3068)
- 43.6 km – least total distance covered in Feb 2019 (female 2778)
- 132.1 km – greatest total distance covered in Feb 2019 (female 2779)
- 5.1 km² – smallest area utilised in Feb 2019 (female 2778)
- 90.2 km² – largest area utilised in Feb 2019 (female 2779)



The natural birth and recruitment into any reintroduced population is a significant moment, confirming the success of the project from the perspective of the animals, in terms of adaptation to, and colonisation of, the new environment.

Thus begins a new chapter in the history of the Delta ecosystem