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### **Third field report from the Udzungwa Leopard Project**

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The camera-trapping data collection has entered its second year, this time in the northern most part of the park, known as Mbatwa, which is semi-arid, consisting of mixed baobab, Commiphora – Brachystegia and acacia forests, as well as high elevation grasslands, and altogether ranging from 500m above sea level to nearly 2000m.

During 13-20 June, we (Rasmus and Francesco) along with the team of field assistants and armed rangers managed to setup 34 stations (each consisting of 2 cameras) in the pre-defined grid of 2 km<sup>2</sup> covering an area of 130 km<sup>2</sup> over an altitudinal gradient of 1500 m in the 8 days period. After setting together the first few cameras, we divided into two teams to be able to set up to 8 camera stations each day.

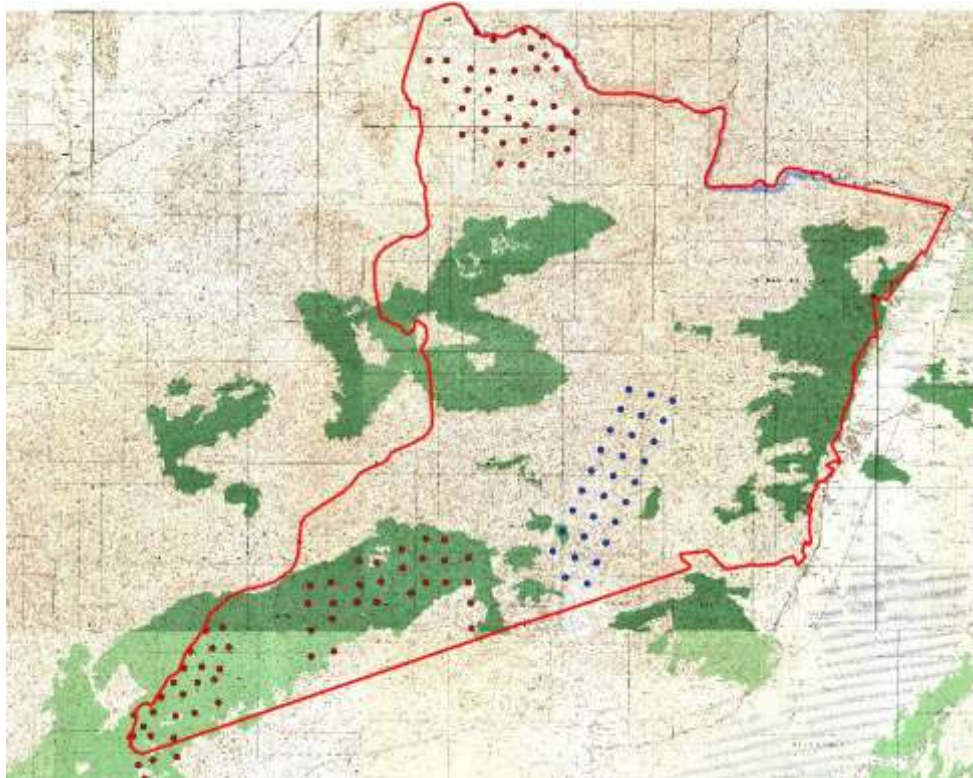
Signs of leopards, as well as of many other mammals, were detected during the setup and retrieval of cameras, and the results have revealed 6 individuals within the area surveyed, 4 males and 2 females, that however were caught in only 10 of the 34 camera-trap stations, for a total of 26 recaptures for all individuals.

This is in contrast to the previous two surveys conducted in 2013 in the lowland rainforest sites (Ruipa and Lumemo), where the camera-trapping showed 14 individuals and 10 individuals respectively, and a total of 63 recaptures. Pending more in-depth, capture-mark-recapture analysis, preliminary analytical trials on the data from the first 2 sites sampled in 2013 estimated that there are **5.5 leopards per 100 km<sup>2</sup>** in the lowland rainforest. We expect lower densities of leopards in the northern semi-arid area compared to the rainforest.

Interestingly however, the third survey in the semi-arid area detected a remarkable 30 species of mammals caught in the camera-traps, in contrast to 32 species captured in the rainforest. Among the species trapped, the survey yielded the first record of klipspringer (*Oreotragus oreotragus*) in the national park as well as reaffirming that the seldom seen caracal (*Felis caracal*), ground pangolin (*Smutsia temminckii*) and Sable antelope (*Hippotragus niger*) are present along these northern and dry slopes of the park.

This third survey was therefore successful, with the exception that two camera-traps (one station) were stolen, presumably by poachers and one camera-trap was destroyed by an elephant.

**Plans ahead:** the next site of camera-trapping has started on July 26<sup>th</sup> in the major valley between the two major mountain forest complexes of the central part of the park and will last until August. After this site, whose results will be reported in the next report, surveys will be conducted in the remote, western montane forest of Ndundulu-Luhomero (butterfly-shaped forest to the west on the map figure 1) in September-October to then close the study in the Mwanihana forest in the east in December 2014 – January 2015.



Map of Udzungwa Mountains National Park. In the far south the two camera-trap grids of Ruipa and Lumemo (red dots) in the lowland rainforest that were sampled in 2013. In the far north the camera-trap grid in the semi-arid Mbatwa (red dots) which is described in this report. The blue dots are the grids planned for the on-going survey.