

# CAMERA TRAPPING RESULTS FROM JABEL HAFIT, ABU DHABI, UNITED ARAB EMIRATES

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## INTRODUCTION

Through history and local knowledge it was known that the Arabian tahr (*Arabitragus jayakari*) occurs on Jebel Hafit Mountains of Al Ain in the Abu Dhabi Emirate with other mammals such as red fox, feral goats, and Blanford's fox. With new camera trapping technology and efforts of the Environment Agency – Abu Dhabi (EAD) Terrestrial Marine Biodiversity Sector team, we are carrying out a study from 2011 to present. This paper describes our experiences with a terrestrial mammal monitoring system on Jebel Hafit and the results showing the occurrence and threats to the critically endangered mammal species in this particular habitat in Abu Dhabi which is Jebel Hafit. For the first time, the camera traps enabled us to collect baseline and population data on mammals and we now have a clearer picture of what species are present on the jebel. For the first time EAD re-confirmed the presence in 2012 of Arabian Tahr on Jebel Hafit, and the last confirmation of the Arabian Tahr was in 2004, by the Arabian Tahr Conservation Group, Sharjah (ATCG)

## METHODS

Choosing suitable sites to set the camera traps is one of the most important criteria to figure out the absence and presence of the animal. In our study we set the camera traps based on the historical range, local knowledge on animal routes, water points on the mountain (pools in wadis during the rains) and vegetated areas to maximize our opportunity to capture any mammals in the area. Jebel Hafit is the only mountain, and certainly the most prominent landscape feature, within the Emirate of Abu Dhabi. It is aligned in a north to south direction and is approximately 17 km long, with its highest altitude being 1,300 m above-sea-level. Jebel Hafit is the south most, and by far the largest series of mountain ridges which run north-south in the vicinity of Al Ain (Richard, 2004). The exact camera trap locations were recorded using a handheld GPS unit. Also recorded the following information: camera trap ID number, date, time, temperature, moon phase, and when camera trap starts to operate it also gives us a description of the macro- and micro-habitat around the camera trap. Based on our study there is no correlation between the Arabian Tahr and moon phase; however, it gives us an idea of what the animal feeds on when the camera captures the macro-habitat and in some instances when Tahr can be seen feeding on a bush.

Six Camera traps were set in different places on Jebel Hafit and these places were also dependent on accessibility, restricted areas, etc.. The cameras were set up for more than 165 nights combined. Eight visits has been conducted to Jebel Hafit to retrieve the data, we try to minimize our activities in the Arabian Tahr area to avoid any habitat disturbance and causing them to move away as they are known to be territorial animals, especially the males.

## RESULTS AND DISCUSSION

Altogether 14 different sightings of Arabian Tahr have been captured on the camera traps and they were 4 males, 5 females, and 5 unknown (it is highly probable that some of these images could have been the same individual(s) recorded multiple times). We can estimate that there are at least 6 individuals and we have also recorded a female Arabian Tahr with a kid. This estimate is based on the dates and times of the year that the individuals are recorded on the camera traps.

Out of the 6 cameras we have only recorded Arabian Tahr, Feral Goats, Red Foxes, and Feral Cats in our 4 cameras which were on the east side of the mountain. Both cameras on the west side did not capture any animal activities. This could be due to the human activities on the foot hills. Other important natural threats that the Arabian Tahr might face is competition for food and resources and disease transmission from feral goats. The only medium-sized carnivores we have detected are red foxes though we did not see any direct evidence of predation from this species.



Figure 1 Map Showing the locations of the Camera Trap deployed during the Study (© EAD –Abu Dhabi)



Figure 2 Figure showing the Capturing of the Camera Trap and inset RECONYX camera Hyper Fire Professional IR (PC800) ©Soorae

In conclusion, the data gathered throughout our survey on Jebel Hafit shows the terrestrial mammal activity at the site – data relevant to public awareness and long-term conservation issues. We do not consider the survey to be exclusive to provide a comprehensive analysis but feel there is a strong motivation for further research into a satellite tagged monitored programme for Arabian Tahr to deduce their home range size, movements on the mountain and whether they undertake any cross-border movements.



Figure 3 Camera Trapped Image of Arabian Tahr at Jebel Hafit

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