

PRELIMINARY STUDIES ON DIURNAL TIME ACTIVITY OF CAPTIVE ARABIAN ORYX (*ORYX LEUCORYX*) IN AL AIN WILDLIFE RESORT AND PARK, AL AIN, UAE.

Sharifa A.A. Al Maqbali¹, Aysha Al-Baloushi¹ & Sabir Bin Muzaffar¹

Affiliation: ¹Department of Biology, Faculty of Science, United Arab Emirates University, Al Ain, UAE, PO Box 17551. s_muzaffar@uaeu.ac.ae

INTRODUCTION

The Arabian oryx (*Oryx leucoryx*) is endemic to the hyper-arid environments of Arabia. Currently wild populations of the Arabian Oryx are limited, collectively totalling about 1100. The captive oryx populations total 6000-7000 individuals. Behavioural data on the Arabian oryx is limited and has been targeted towards quantifying behaviour that is of practical value in reintroduction efforts. The authors quantified activity budgets of captive Arabian oryx to help captive management efforts.

METHODS

This study was conducted at the Al Ain Wildlife Park and Resort (AAWPR) in Al Ain, UAE. The AAWPR has a captive breeding and re-introduction program for the species. We observed focal animals and recorded individual behaviors every five minutes. Each focal individual was monitored for a period of 1-2 hours at designated times (Morning 9:00AM-11:00AM; Afternoon 12:00PM-3:00PM; and Evening 4:00PM-7:00PM). A total of 13 hours of observation was made during the course of this study on seven Arabian oryxes housed in a mixed species enclosure in March and April, 2009. Other species present in the enclosure were Sand gazelles (*Gazella subgutturosamarica*) and Dorcas gazelles (*G. dorcas*).

Results and Discussion

Little is known about the time activity budgets of the Arabian Oryx in the wild. Desert animals generally tend to be most active in the early morning and late evening. Most 'active' behaviours were observed in the morning and evening and the oryx were least active in the afternoon, when they were observed to be sitting, standing, ruminating, and occasionally sleeping. Standing was the major activity that formed 28% of overall inactive behaviours, followed by sitting (12%) and ruminating (8%). Walking accounted for 19%, feeding from container 12%, while other behaviours were recorded <10% of the time (e.g. scratching, grazing, alert, running etc.). Standing and sitting are regarded as initial



Fig. 1: Arabian Oryx. (©Tom Bailey)

responses to thermal stress the increase in these behaviours and decline in walking in the afternoon may have been due to heat stress. We did not observe drinking in adults during the study although water was abundant in the enclosures and this could be because the Arabian Oryx meets its entire water requirement by eating plants with high water content. There are limited studies on time activity budgets in the wild. Oryx seem to allocate less time during the day for active behaviours, especially in the summer, with grazing activities being limited to the night. In winter, more time is allocated to finding food during the day. Whether limited activity associated with grazing has measurable health implications (like overgrown hooves) is not known.

Females were apparently more active than males. Males were seen sitting (23%) more often than females (3%). When male oryx became active, they exhibited many behaviours over a short time. Males spent less time standing (27%), feeding (7%), or grazing (1%) compared to females (37%, 16% and 6% respectively). Males were seen urinating more frequently (5%) than females (0%). Both sexes showed similar levels of ruminating, alert, running, and intra-specific agonistic display.

Two new-born oryx observed in this study were seen remaining motionless and often hidden. The activity of an older calf (born before the study started), however, showed that they were very active and playful (often with gazelles and with adult oryx; 9% of all behaviours) compared to adults. In young oryx, standing (27%), sitting (23%), and walking (18%) were important activities. Young oryx were seen suckling and were generally curious. We also observed one instance where the mother consistently refused to suckle the calf, a behaviour often reported in inexperienced captive mothers.

This study reports preliminary data on the behaviour of oryx at AAWPR. The authors plan to expand this study by incorporating more individuals over two years to obtain a better understanding of behavioural ecology such as group dynamics, courtship, mother-young interactions in this endangered ungulate.

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References:

A full referenced version with tables and figures is available on website