ASSESSMENT OF TERRESTRIAL SMALL MAMMALS IN DUBAI EMIRATE'S INLAND DESERT CONTD.

Results and Findings

The survey started in May 2011, and continued for a year until May 2012. A total of four different species of rodents (Table 1) were recorded in DDCR representing one family (Rodentia) and one order (Muridae).

Table 1. Species caught during the study at DDCR

Species	Common names	Trapped/Sites	Male	Female	Total
Gerbillus cheesmani	Cheesman Gerbil	24	36	25	61
Gerbillus nanus	Baluchistan Gerbil	3	4	0	4
Meriones crassus	Sundevall jird	4	7	2	9
Acomys cahirinus	Egyptian spiny mouse	1	2	0	2

Trapping Success

The equation used in this report for calculating trapping success gives the highest estimates of trapping success during the different seasons.

Seasonal

September to November had the highest trapping success which was expected as there is an abundance of seeds in the area at this time. The season with lowest capture success was summer which we suggest was due to seed availability in the area.

Moon Phases

One of the major findings during the study was that rodents were less active during that portion of the night when there was lunar illumination (moon up) compared to when there was no illumination (moon down). We hypothesized that this moonlight avoidance strategy has been selectively favoured in rodents because of a reduced risk of mortality, attributed to visually hunting predators during moon-down than during moon-up. During new moon, when nights were darker there was an increased trapping success when compared to trapping success during full moon nights when it was a lot brighter.

Weather factors

The weather condition which we argue had the greatest influence on trapping success was the rain. It was observed that the night just after any rainy days, rodents, especially *G. cheesmani*, were found to be most active when compared to other weather conditions. At night, grasses and seeds are permeated with dew, and rodents will take these food items back to their burrows to improve the humidity (Wikipedia 2012) As an adaptation to living in harsh, dry desert conditions where the annual average rainfall during the survey year was very low (1.02mm of rain across the reserve), one would only expect high bouts of activity during these periods. Cloud and the blocking affect of the clouds

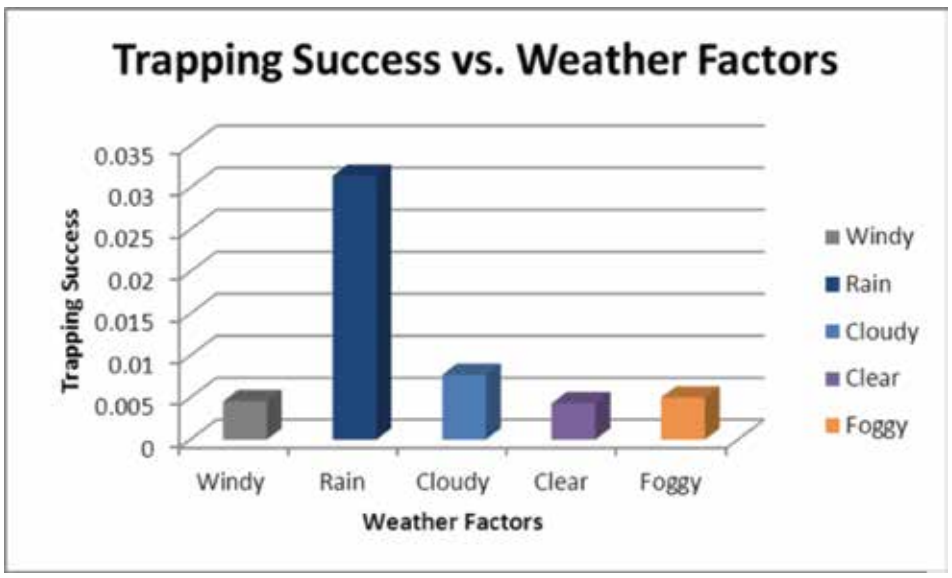

Fig 4 Trapping success compared to weather factors.

Fig 3. Trapping Success (animal per trap-night) compared to moon phases.

proved to be the second greatest factor affecting trapping success. Clouds would reduce or eliminate the majority of the moon phase allowing the rodents more concealment from predators.

Summary and Conclusions

During the yearlong survey a total of 61 *Gerbillus cheesmani* were caught of which 36 were males and 25 were females. This is probably one the most common gerbil species in the whole of the Arabian Peninsula. *Meriones crassus*, had not been captured or identified prior to this survey so this was a new record for the DDCR species list. A total of 9 individuals were trapped, which comprised 7 males and 2 females. *Gerbillus nanus* captures were four which comprised of four males, 0 females. *Acomys cahirinus* was an unexpected species that we caught as it had not been seen before in the DDCR, so was another new species, which was added to the species list for the reserve. This species is extremely habitat specific hence only been caught at one location "Rocky Outcrop" in the reserve. A total of 2 were caught both being males.

REFERENCES

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