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Behavioural observations of Perth Zoo collection animals for animal welfare purposes and establishment of baseline data

Perth Zoo Science

Project Core Team

Supervising Scientist	Peter Mawson
Data Custodian	Peter Mawson
Site Custodian	

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P Mawson, J Polla

Context

Maintaining or improving animal welfare is a key consideration in operations at Perth Zoo, and behavioural observations of collection animals is a means of ensuring effective management approaches. Many observational studies conducted on Perth Zoo collection animals in the past have provided Zoo staff with insight into animal behaviour and generated recommendations on how to improve quality of life (e.g. through specific enrichment or modifications to enclosures or husbandry practices), as well as data to allow comparisons to be made for individual animals over time.

Aims

- Determine what behaviours are exhibited by certain individuals or species of Perth Zoo's animal collection, and at what frequency.
- Compare current data with past studies to see if animal behaviour has changed from what might be expected over time.
- Observe the effects of the current behavioural enrichment programs on behaviour in Perth Zoo's collection animals.
- Observe the effects of Perth Zoo visitors on the behaviour of Perth Zoo's collection animals.

Progress

Analysis of observations of both Sumatran tigers revealed a relationship between exhibit swapping and behaviour, leading to the development of a revised exhibit swapping schedule that supports tiger welfare.

The behaviour of elderly solo lioness "Shinyanga" was recorded before and after the import of two younger lionesses to Perth Zoo, which are housed in the adjacent exhibit. The behaviour of the two younger lionesses was also monitored with a focus on animal interactions and the influence of Zoo visitors on lioness behaviour. The results suggest a positive welfare outcome for all three lionesses, with low levels of stereotypic behaviour and high frequencies of natural behaviours recorded.

The nocturnal resting behaviour of Perth Zoo's elderly female elephant "Tricia" continues to be observed as she ages.

The nocturnal behaviour of the Zoo's two other elephants is being recorded with a focus on the effects of provision of overnight enrichment on behaviour.

Behavioural data has been collected and analysed for the three mother-offspring orangutan groups, informing food-based enrichment management practices and benefitting animal welfare.

A pair of golden lion tamarins have been observed with a focus on breeding behaviour and other affiliative behaviours.

Data has been collected on Javan gibbon siblings; female "Sunda" and male "Owa", after the passing of their mother "Hecla". Results have been compared to data collected in 2017 on "Owa's" behaviour and reveal a positive welfare outcome, as the percentage of time "Owa" engaged in positive interactive behaviours with other gibbons remained stable across the two time periods. The data collected from this study has created useful baseline data on the behaviour of female Javan gibbon "Sunda", which may be used to compare to data gathered in the future when "Sunda" is housed in a new social grouping.

The behaviour of the recently born female white cheeked gibbon "Lulani" is being monitored, along with the behaviour and interactions of mother "Jermei" and brother "Canh".

Inter-species interactions between binturongs and otters living in a shared exhibit are being monitored. The breeding interactions and other affiliative interactions between the adult binturong pair are also being recorded.

Management implications

- Empirical behavioural data gathered through this project allow Zoo staff to make informed decisions about animal welfare changes as animals age or respond to new or altered dietary regimes; monitor animals during introductions of new exhibit mates or breeding animals; validate enrichment programs; quantify animal use of exhibits before and after redesign; and measure visitor interaction with exhibited animals and the uptake of interpretation materials provided to visitors.

Future directions

- The spatial use of areas within the Australian Bushwalk exhibit by the four macropod species housed in the exhibit will be monitored, with information collected regarding visitor density and visitor noise levels to determine the effect of visitor presence on the animals' behaviour. This data will be used to assess whether changes to the current visitor pathway route through the Australian Bushwalk are necessary to optimize animal welfare.