

INTRODUCTION TO ENVIRONMENTAL ENRICHMENT AT AL AIN WILDLIFE PARK AND RESORT (AWPR)

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One of the main objectives of Al Ain Wildlife Park and Resort (AWPR) is to safely recreate environments, situations and challenges for animals that will encourage natural, species-appropriate behaviours. To assist in the achievement of this goal, a training and enrichment committee was formed at AWPR in 2010. We would like to introduce the concept of environmental enrichment and how the practices initiated at AWPR have seemingly enhanced our husbandry routine as well as our guests' experience.

Animal enrichment generally refers to any changes to the animal's environment that helps to provide a positive outcome and bring about improved welfare (Young, 2003). Enrichment aids in avoiding potential harmful behaviours which include stereotypic behaviours and excessive grooming, amongst others. An efficient enrichment program can be more important than the size of the enclosures. (Smith, 2005).

Enrichment comes in many shapes and forms and is usually divided into the following categories: Diet-based enrichment, physical enrichment, sensory enrichment, social enrichment and cognitive enrichment. An example of the type of enrichment noted could include: foraging behaviour (diet-based), climbing structure (physical enrichment), distribution and introduction of approved herbs / spices (sensory enrichment), introduction of mixed species habitat (social enrichment), introduction of puzzle feeder (cognitive enrichment).

When offering enrichment to animals, it is important to remember that it can result in different behaviours in different species, individuals and even the same individual at different times. Just as important as implementing enrichment, is the approval process, monitoring, evaluating and recording effects, as well as introducing new elements. It is extremely important to introduce an enrichment proposal with full assessment and approval procedure that would include Veterinary Services understanding of the idea, implementation and monitoring period. Some examples of ongoing practices at AWPR include browse items, spices, herbs, ice blocks, scatter feeds, snake sheds and bird feathers. It has been suggested that one of the benefits of animal training is that it is enriching, although currently there is not sufficient data to support or disprove this (Hosey *et al.* 2009). In our experience at AWPR, however, training has proved to be a valuable tool that our animal care staff use to enhance the welfare of the collection. AWPR's training program is based on the principles of operant conditioning, using positive reinforcement as the primary tool. Several of our carnivores have been trained using positive reinforcement to participate voluntarily in their own medical care, including treatment of wounds and hand injections for annual vaccinations. Many are also trained to step onto a scale for monthly weighing. Positive reinforcement training has also been implemented by our education staff when presenting program animals to school groups.



Fig 2. Behavioural/operant conditioning of a cheetah (Xavier-AWPR)

One goal of our training and enrichment committee is to incorporate environmental enrichment into the husbandry routine of every animal and to familiarise AWPR Staff at all levels and departments with their role in the program. All staff in all departments can be involved in animal enrichment either directly or indirectly. Our horticulture department cuts and delivers browse to primates and carnivores on a weekly schedule. Our education department offers an enrichment program for AWPR's Summer and Winter Camps. In this program children learn about the importance of environmental enrichment and are given the opportunity to make enrichment items. These items are then presented to animals while



Fig 1. Bengal tiger with meat ice block enrichment (Xavier-AWPR)

the children observe and evaluate their responses. Staff in the maintenance department have constructed enrichment devices such as puzzle feeders for meerkats, while staff members in other departments have collected cardboard boxes, tubes, shredded paper and newspaper to be used for enrichment.

Humans (both zoo staff and zoo visitors) are part of the zoo animal's environment and are likely to have some impact on the behaviour. Likewise, the animals are likely to have some impact on the humans as well. AWPR aims to make all human-animal interactions as positive an experience as possible.

A study at Beijing Zoo by Davey *et al.* (2005) found that visitor behaviour changed when viewing an enclosure in which enrichment had been added. In particular, viewing and stopping times increased in comparison with those at the enclosures prior to enrichment.

Although studies need to indicate the percentage of visitor's time spent in front of exhibits at AWPR, it is our goal to provide the animals with both behavioural and environmental stimuli that will solicit naturalistic behaviours within their habitats. Improving guests' perception of our husbandry practices, aiming for longer viewing periods in front of the habitat and increasing visitor's interest and understanding of conservation messages continues to be one of our main objectives.

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Full references are available in the online version.