



*The effects of movable novel objects, novel olfactory stimuli
and novel auditory stimuli on the exploratory, play and
stereotypical behaviour of captive species: A comparative
study.*



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Abstract

In recent decades there has been an increasing interest in the area of environmental enrichment for captive animals. The central premise of this thesis was that four species in captivity would be enriched, by increasing levels of exploratory and play behaviour and decreasing stereotypical behaviour, by providing them with access to three different types of novel stimuli. It was expected that each type of novelty would elicit different reactions from each species. Various theoretical constructs have been suggested to explain exploratory and play behaviour, however no theory has satisfactorily explained exploratory or play behaviour in all their forms.

The experimental component, of the current research, involved presenting three different types of novel stimuli, including novel objects, auditory and olfactory stimuli, to four species. The subject species were Barbary sheep, zebra, oriental small-clawed otters, and collared peccaries.

The series of studies employed a modified repeated measures design. In each of the studies the animals were presented with a different type of novelty. The novelty included movable and non-movable objects, food-related olfactory stimuli and predator-associated auditory stimuli. Visual inspection was the main form of data analysis due to low subject numbers and because it allowed individual and group reactions to be reported.

Results indicated each type of novelty stimulated increases in both exploratory and play behaviour and decreased stereotypical behaviour. In addition to these overall increases, some types of novelty were found to affect these behaviours more than others. Overall these results suggested that the different responses were related to the biological significance of the novel stimuli for the individual and the species concerned.

Discussion focussed on factors that can be used to predict how a species will react to novelty, including the ecological niche of the species, feeding patterns and the biological significance of the novel stimuli. In addition to this, other factors, such as the previous experiences of the individual, have to be considered. It was concluded that novelty, including objects, odours and auditory stimuli, is a simple, cheap and effective method of enriching the lives of animals in captivity.

Statement

This work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

I give consent to this copy of my thesis, when deposited in the University Library, being available for loan and photocopying.

Signed _____

Kathryn Lampard

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