

TUESDAY 2 OCTOBER 2018

ZSL SCIENCE AND CONSERVATION EVENT

The Meeting Rooms, Zoological Society of London,
Regent's Park, London NW1 4RY

AGENDA

Giving animals choice: how ZSL's Zoo Keepers use science to positively impact animal welfare

Chaired by **Mark Habben**, Head of Zoological Management, ZSL

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'Land of the Lions': how behaviour management has supported Asiatic lion conservation at home and in India

ABSTRACTS

Giving animals choice: how ZSL's Zoo Keepers use science to positively impact animal welfare

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What is animal welfare?

Lisa Clifforde, Animal Welfare Officer, ZSL

Animal welfare science is a growing field that is rapidly being adopted by zoos across the globe. ZSL has been one of the first zoos to employ a full time Animal Welfare Officer to advise on welfare matters within the living collections. This talk will discuss what welfare actually means and how it can be objectively assessed within our zoos. The common pitfalls and challenges will be highlighted, as well as methods to deal with welfare concerns and ZSL's focus on a proactive approach to maintaining high levels of welfare across all species.

Lisa Clifforde is the Animal Welfare Officer for ZSL's London and Whipsnade Zoos, a role which is responsible for assessing current states of welfare, resolving concerns and developing proactive strategies to prevent new issues arising. Lisa has a specific interest in broadening the scope of animal welfare assessment to incorporate all taxa and has worked intensively on developing assessment criteria that can be applied across the full range of ZSL's animal collection. Prior to joining ZSL, Lisa qualified with a degree in Animal Behaviour & Welfare from Chester University and subsequently worked as a keeper, animal manager and curator within other BIAZA collections. Additionally, she has undertaken research and voluntary work in Africa and Asia on carnivore and primate reintroduction and rehabilitation programs, and now trains both keepers and veterinary students on animal welfare assessment. Lisa also sits on the BIAZA and EAZA Animal Welfare Working Groups, and the BIAZA Reptile and Amphibian Working Group.

Giving animals choice:

The practical application of behavioural science in ZSL's animal training programmes

Jim Mackie, Animal Training and Behaviour Officer, ZSL

ZSL has a long history of applying the principles of behavioural science in its animal training programmes. To begin with this was mainly to encourage voluntary participation in live animal educational demonstrations such as training free flying birds and sea lions. More recently, in the last decade or so, keepers have embraced the same techniques to enhance animal welfare through the use of trained behaviours for veterinary care and improved husbandry. The zoo keepers' favoured

training technique is called positive reinforcement training (PRT), which is one component of BF Skinner's theory of operant conditioning. Simply put this type of learning involves an animal choosing to behave a certain way following an antecedent stimulus offered by the trainer. If the animal offers the correct behaviour it is rewarded, or reinforced, with something pleasant, such as a favourite food item. Operant training has led to huge advances in animal welfare by the reduction of potential stressors in animal daily care. ZSL has won multiple industry awards and is considered one of the leading proponents in this field within European zoos and aquaria.

Jim Mackie was appointed ZSL's first Animal Training and Behaviour Officer in 2012 having previously demonstrated the value of trained behaviours to improve husbandry and welfare in the Zoo's living collections. Jim's interest in animal behaviour began when he trained his own raptors for educational demonstrations 25 years ago. This led to an opportunity to join ZSL's animal display department where he worked for ten years developing the Zoo's visitor education programme. Jim realised that the techniques associated with training animals for demonstrations could be transferred to the whole living collection to augment, and ultimately replace, the more traditional management techniques of chemical and manual restraint when applied to medical and husbandry procedures. Jim's passion for sharing information in the field of operant learning and behavioural enrichment in zoo animals led to formation of ZSL's Behaviour Management Committees, at both London and Whipsnade Zoos, and later the British and Irish Association of Zoos and Aquaria (BIAZA) Animal Behaviour and Training Working Group which he chairs. In this capacity Jim is currently working with the Animal Behaviour and Training Council (ABTC), the government endorsed regulatory body which maintains the national registers of appropriately qualified animal trainers and behaviourists and education providers, to create a formalised education and accreditation programme for animal trainers in zoos and aquaria. Jim is also a member of the EAZA Training Group and an EAZA Academy Instructor. In 2015 ZSL was the recipient of a BIAZA gold award in the welfare category for its work in establishing a coherent, collection-wide animal training programme for veterinary and husbandry care.

Utilising Positive Reinforcement Training to support African wild dog conservation

Luke Harvey, Deputy Team Leader, Predators, ZSL

Collaborating with ZSL's Institute of Zoology and Swansea University's Laboratory for Animal Movement (SLAM), ZSL London Zoo keepers planned a positive reinforcement training (PRT) programme to facilitate the fitting of biologging collars to two male African wild dogs. Crucially the training was set up to allow for voluntary participation, with continuous evaluation and adaptations made, to ensure the welfare of the animals was not compromised. As well as exploring a new method to monitor animal behaviour, enclosure use and assessing zoo animal welfare, the project will help field scientists to interpret data from similar collars fitted to free-ranging wild dogs in Africa. This will allow conservationists to build a vivid picture of wild dog activity, ultimately providing crucial information for the development of informed, long-term, species survival strategies.

Luke Harvey has worked in a variety of zoological environments for the past 14 years, the last 6 of which he has enjoyed sharing time between ZSL London and Whipsnade Zoos. Behaviour management training is a big passion for Luke. He finds it one of the most interesting and rewarding parts of his job. It involves problem solving, patience, sometimes frustration but also a lot of fun. With the biggest reward seeing positive results for the benefit of the animals' welfare. Although the majority of his career has been based in elephant care, since joining London Zoo 3 years ago Luke quickly became fascinated with the Zoo's pack of African wild dogs. Working with the dogs reinvigorated his passion for field conservation. This led him to collaborating with ZSL's Institute of Zoology, and designing a behavioural management programme that benefits both zoo animal welfare and in-situ field conservation.

Advancing environmental enrichment

Matt O'Leary, Senior Keeper, Elephants, ZSL

Environmental enrichment is a commonly used husbandry principal in zoological collections around the world that aims to provide both mental and physical wellbeing to animals within zoos. In order to reach optimal levels of mental and physical wellbeing, enrichment programmes need to be well planned with specific behavioural goals that are based on the species natural history and the individual animal's preference. This enables a bespoke behavioural programme that is suited to each individual within a zoological collection and promotes choice and control. This talk will detail the steps needed to reach optimal enrichment effectiveness while showing examples of enrichment aimed to promote species-appropriate behaviours.

Matt O'Leary is currently Senior Keeper based in the Asian Elephant Section at ZSL Whipsnade Zoo. Along with working with elephants, Matt has experience working with a wide range of mammal species including big cats & bears. In 2016 Matt represented ZSL in a project in partnership with Australian charitable wildlife-protection organization Free the Bears. Matt conducted a series of workshops in Laos & Cambodia helping to train staff and help improve animal welfare practices in South East Asian wildlife sanctuaries. Matt is an instructor for the EAZA Academy Programme and has hosted workshops in four European countries as part of their animal welfare programme.

'Land of the Lions': how behaviour management has supported Asiatic lion conservation at home and in India

Jim Mackie, Animal Training and Behaviour Officer, ZSL

ZSL, along with the Wildlife Institute of India and the Gujarat Forest Department, collaborated on a major behaviour management project to enhance capacity of Asiatic lions in Sakkarbaug Zoo in Gujarat, India. The Sakkarbaug Zoo is home to the headquarters of the Asiatic lion conservation breeding centre which houses over sixty Asiatic lions. It has played a crucial part in ensuring this magnificent species has been brought back from the brink of extinction. This presentation describes how the collaboration, through workshops, behavioural studies and enrichment provision, had a significant impact on the behavioural husbandry of lions, and other species, in Sakkarbaug Zoo. Also highlighted is how ZSL experts applied the knowledge they gained from their time in India in helping our own Asiatic lion pride to settle into their brand new home, Land of the Lions. Look out for a special appearance from Her Majesty the Queen, who opened the new exhibit in front of our wonderful lion pride!

Chair: Mark Habben, Head of Zoological Management, ZSL