IPS Pre-Congress Training Programme
Edinburgh Zoo, Scotland, 29 Jul-3 Aug 2008

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I was selected to attend the training workshop "Improving captive primate welfare through good behavioural husbandry" preceding IPS 2008 hosted in Edinburgh. This five day workshop was an excellent opportunity to interact with an international group of professionals at single platform, who are dedicated to the study and practical improvement of primate welfare in zoos and other captive facilities maintained for various reasons viz. medical research, rescue and rehabilitation, etc. Together, it presented a synthesis of the major advances in the theoretical and practical provision of behavioural husbandry (BH) achieved in zoos and other captive animal facilities in recent years.

During this five day workshop following topics were covered:
· Components of behavioural husbandry, limitations of implementing behavioural husbandry in institutions
· Primate welfare overview, assessment of primate welfare in zoos
· Enrichments and its effectiveness, management of enrichment programme, designing enrichment
· Basic concept of animal learning
· Record Keeping, time management
· Assessment and evaluation of behavioural husbandry
· Setting up networks and PR to get material for enrichment
· Implementing behavioural enrichment in our institution for primate welfare

Delivery Team
· Dr Vicky Melfi, Senior Research Officer, Whitley Wildlife Conservation Trust
· Prof Geoff Hosey, University of Bolton, UK
· Charlotte MacDonald, Living Links, Edinburgh Zoo, Scotland
· Julian Chapman, Paignton Zoo Environmental Park
· Margaret Hawkins, Taronga Zoo, Sydney, Australia
· Dr Mollie Bloomsmith, Zoo Atlanta, US
· Doug Cress, PASA, PanAfrican Sanctuary Alliance
· Lorna Hughes, Edinburgh Zoo
· Nicky Jago, Paignton Zoo Environmental Park
· Graham Catlow, Edinburgh Zoo

Method of training
Games, interactive and peer-led sessions, and group discussions, were some of the important formats of training and imparting skills during the workshop. It was an eye opening event for zoo managers like me which inspired, encouraged and motivated to implement behavioural husbandry. During last few session of the training, role play format was organized which was followed by round table discussions to explore other practical limitations which exist in implementing behavioural husbandry in various institutions of participants and finally trouble-shooting session marked the end of pre-congress training workshops. The entire training was an enjoyable and effective learning experience. It is evident from the example that we had to design the simple enrichment device by using waste material available in the zoo individually and then evaluate the enrichment immediately by using them in the different animal enclosure. All participants and delivery team gave their opinion on the design, safety issue and use of materials. At its simplest, social and professional networks have been established among all participants, who attended the workshop. Finally at best, participants made a commitment to practice the knowledge, skills and equipment provided in the workshop on their return home.

Lesson learnt
It helped the participants to find out the ways to prioritize time and resources, enabling them to develop behavioural husbandry regimes in their home institutions. Above all, the skills acquired during the workshop gave me confidence to initiate a regular environmental enrichment plan and positive reinforcement training not only for captive primates but for other animals of our zoo which would promote welfare of aforesaid animals. Behavioural husbandry has two components viz. environmental enrichment and training of captive animals by using positive reinforcement techniques.

Positive reinforcement training techniques
Positive reinforcement training techniques are regularly applied to train single or group of captive animals to perform some task voluntarily into the indoor portions of their enclosures at the request of trainers, briefly.

As it aims to train animals to perform some desirable tasks for many purposes therefore, in many situations, the training process saves veterinarian and technician time, and avoid stress or even danger to the animals due to sedation. The training provides substantial savings in personnel time and facility's finances. The training utilizing positive reinforcement methods also helps to encourage positive interactions between the animals and their caregivers, which can be seen as a form of enriching the animal's lives.

The training program has potential to improve the efficiency of the animal care staff, results in reduced stress associated with some common animal care processes, and provides a challenging activity for the animals to be involved in.

The training allows for greater opportunities for the behavioural researcher and is enriching for the animals both during training sessions and following them.

***Director, Mysore Zoo, Mysore**

The animals can be trained to cooperate with a wide variety of animal care procedures by relying exclusively on positive reinforcement techniques.
e. g. trained chimpanzees voluntarily enter a transport cage so they can be moved from one enclosure to another, reliably provide a urine sample on cue, present various parts of their bodies for examination, such as showing a wounded finger for treatment or opening his/her mouth to allow inspection of the teeth and throat, cooperate with receiving a hypodermic injection, with the construction of a "blood collection sleeve" can permit to draw blood sample while fully conscious.

Environmental Erichment
Environmental enrichment is the provision of stimuli which promote the expression of species appropriate behavioural and mental activities in captive environment. It helps the captive animals to display of a variety of behaviours in different species. This concept has based on fundamental principle that these enrichment devices give an opportunity to captive animals to optimise their activity time and display some behaviours that they show in the wild. Therefore, through environmental enrichment, the animal keepers try to achieve captive conditions which approximate the natural habitat factors to achieve natural level of fitness of the captive species.
In most simple language, when an animal keeper in zoo, a pet owner, lab technician, hobby farmer or smallholder does something to improve the welfare of their animals.

Why?
o To try and keep our animals active at the times when they should be active, we want to keep them fit and healthy and we want them to do similar behaviours to their species that are in the wild.

o The zoo management is always under scrutiny because they invite the public and press in to view our work. All of this means that zoos have to display wide variety of animals in the best possible mental as well as physical health, in well maintained "naturalistic enclosures".

Function
o Enrichment can promote species-typical behaviour by providing the animals with a complex and unpredictable environment which result in increased frequency of interactive behaviours such as exploration, manipulation, play, and social interaction. Thereby improving animal well being by increasing exercise, satisfying "behavioural needs" and optimising the level of stimulation and simultaneously reducing abnormal behaviour patterns.

Use
o It is vitally important to study your animals before, during and after the enrichment is given to them. It is no use thinking that you have put the enrichment in and everything is going to be OK now.

o Enrichment has often been used to aid people with the management of their animals, one of the main times that we might use it is when we are mixing animals for the first time, and it is used simply as a distraction to help alleviate any aggression that may occur.

o Changes in enclosure structures, feeding schedules or social groupings, can reduce neurotic stereotypical behaviours such as pacing or over-grooming. Also, promote behaviours which resemble those observed in the wild. An enriched environment should also offer a captive animal a sense of control resulting from the ability to make choices for itself.

o In case of dominant animals in a group dominates enrichment often increase the number feeding stations or increase the time that the food is available so that one animal simply can't commandeer it for the whole day.

o The most important thing to remember is that the enrichment should be fun for both the animals and you!

Limitation in implementation of behavioural husbandry in Sri Chamrajendra Zoological Gardens, Mysore
Despite the fact that in Sri Chamrajendra Zoological Gardens, Mysore much of these practices are already in place but it has never been implemented and documented in organized scientific manner. Further available records indicate that no serious attempt has been made to evaluate animal training objectively by using systematic study design, data collection, and statistical analysis of data. The important reason behind this lacuna is illiterate animal keepers, who are although capable enough of observing animals and their behaviour but unable to maintain records. The situation get worse with limited financial resources, lack of incentives, professionals' support and guidelines and absence of transfer of knowledge from these highly experienced animal keepers to published documents in peer-reviewed and professional journals.

Author participating in the workshop games.