

## **EXPLORING AND ADVANCING ENVIRONMENTAL ENRICHMENT A PRIMATE TRAINING AND ENRICHMENT WORKSHOP**

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### **INTRODUCTION**

Environmental enrichment programs for nonhuman primates are now mandated by law. However, the true benefit of enrichment programs to the well-being of animals is ultimately determined by the people involved with animal care at individual institutions. Effective enrichment programs require people who are knowledgeable, motivated, and adequately supported within their institutions with the resources necessary to sustain the program. While each institution must create these circumstances in their own way, there are many common issues that must be addressed at every responsible institution housing nonhuman primates. One of these issues is educating staff about animal well-being and enrichment. This article describes one technique that we have developed to help educate people about environmental enrichment for nonhuman primates by offering a workshop targeted for people caring for primates in laboratories and zoos.

The desire to develop this workshop grew from our belief that many people responsible for daily primate care do not have access to current information about environmental enrichment and animal training techniques designed to improve the care and well-being of animals. Each of us has attended many professional conferences and meetings where these topics have been discussed, but typically most attendees are not providers of daily animal care. We perceived a need to expose these "front-line" animal caregivers to behavioral management topics and to have an opportunity to discuss some of the problems in their own primate colonies with professionals in the field. We felt that this was important because in most facilities it is the front-line people who have direct responsibility for sustaining enrichment programs. So, in 2003, after discussions with Dr. Michale Keeling, the Chairman of the Department of Veterinary Sciences, M. D. Anderson Cancer Center, we developed and implemented a four-day workshop for laboratory primate caregivers and zoo primate keepers entitled, "Primate Training and Enrichment Workshop" (PTEW). To-date we have taught this workshop three times at the Department of Veterinary Sciences in Bastrop Texas, and we plan to offer it again. (Author's note, the PTEW was offered a total of 21 times over 18 years.)

The workshop is intended to develop skills in laboratory primate caregivers and zoo primate keepers to better manage the behavior of the primates in their care. The PTEW emphasizes two areas: effectively enriching the environment of nonhuman primates and training them to perform behaviors that will promote their care and well-being. The training portion of the workshop teaches participants some basic training skills and positive reinforcement techniques, and the enrichment portion teaches a variety of strategies to elicit more desirable behavior from captive primates. Participants are then encouraged to apply this general information to their own work settings.

We feel that educating primate caregivers about animal training and environmental enrichment is important for several reasons. It helps develop the skills and knowledge that must be the basis for any good behavioral management program. It helps maintain progressive, current animal care policies by

keeping staff up to date with new findings and techniques coming from the rapidly expanding scientific literature on primate well-being. The workshop experience, which offers the opportunity for sharing ideas, provides a positive, motivating influence that can improve the dedication of caregivers to their jobs. Effective education should improve the ability of the animal care staff to identify, address, and hopefully avoid a variety of animal well-being problems that may be frustrating or difficult for them as caregivers. Finally, the investment in personnel education demonstrates institutional responsiveness to animal care regulations by trying to stay current with new methods to promote well-being.

## **GOALS**

Our *Primate Training and Enrichment Workshop* emphasizes practical information in a "nuts and bolts", hands-on forum. The material presented targets the concerns of front-line primate caregivers, but veterinarians, curators, and others with roles related to primate care also attend and bring their insights to the program. A fundamental objective of the workshop is to bridge the gap that often exists between primate caregivers in laboratories and those in zoological parks. We also hope to increase the communication between the producers and users of products related to the care of nonhuman primates.

The workshop has seven major informational goals. We want to:

- 1) Enhance the participants' ability to apply the concepts of natural primate behavior to implementing environmental enrichment.
- 2) Convey operant conditioning terminology.
- 3) Explain a variety of current enrichment and training options.
- 4) Familiarize participants with the application of training techniques to a variety of situations.
- 5) Identify informational resources for training and enrichment.
- 6) Improve the participants' ability to design and evaluate enrichment and training strategies.
- 7) Enhance the participants ability to generate training and/or enrichment solutions for specific behavioral problems.

## **HOW IT WORKS**

The PTEW is designed to be an interactive, hands-on, practical experience for the participants. Attendance is limited to 25 people, a number large enough to provide great diversity in experience, while being small enough to invite participation. The group is balanced between zoo and biomedical professionals to foster greater communication and sharing of ideas and technologies between the two communities. It is our very strong belief that a great deal of good can come from bringing people with different work experience, but common interests and objectives, together. The universally positive response we have received from participants validates that belief.

The Workshop presents an eclectic mix of formal classes with lectures and discussion, structured interactions in small work groups, hands-on projects, and live demonstrations with resident animals. The curriculum consists of equal portions of positive reinforcement training techniques and environmental enrichment issues and strategies. The workshop instructors believe that training and enrichment are complimentary processes that are mutually strengthened by utilizing combinations of the two in whatever degree is appropriate for individual situations, and they stress an integrated approach to designing training and enrichment programs that provide maximum benefits for animals and staff.

About half of the time is spent in hands-on activities in various working groups. We encourage (and sometimes gently push) individuals to form groups with as much diversity in experience, expertise, facility type, and species of primates as possible. Participants are given the opportunity to design and build a novel enrichment device and then test it on live animals. They try out their training skills on each other through a fun and effective “training game”. We also take full advantage of the chimpanzees and rhesus monkeys at M.D. Anderson by using them to demonstrate different enrichment strategies as well as various applications of training techniques.

The workshop takes a pragmatic view of the realities of instituting enrichment activities in zoological and biomedical facilities. No program can succeed without support up and down the chain of command. We address these issues head-on, engaging in group discussions, brainstorming sessions, and lively role-playing scenarios to promote empathy with different institutional perspectives, and to teach participants how to develop strategies to deal with them. These sessions seem to provide a much-needed release for the pent-up frustrations of dedicated animal care personnel, who are often surprised at how universal their feelings are.

The workshop is always a work-in-progress. Each subsequent workshop produces new ideas on how to improve the next one. Furthermore, prior to each Workshop participants fill out and return a detailed questionnaire on their facility and animals, and specific problems or issues they would like to work on. With this input every effort is made to incorporate those situations into the curriculum.

## **WORKSHOP RESULTS**

The first two workshops were attended by 57 individuals from 14 different laboratories and 13 zoos. Although we focused our efforts on institutions within the state of Texas, we still received applications and enrolled participants from 8 other states. 75% of all participants were caregivers, keepers, technologists, or supervisors. The remaining 25% of participants were veterinarians, curators, or facility directors. Experience working with primates for enrollees ranged from 1 to 25 years. Table I contains some relevant information concerning the attendees at the workshops and attests to the commitment of these institutions to the continuing education of their people and to increasing behavioral options for their primates.

As mentioned earlier, the workshops were conceived in part, as a mechanism to encourage interaction and the exchange of enrichment and training ideas among individuals working directly with primates in laboratories and zoos. We were overwhelmed by the enthusiasm, cooperation, and camaraderie exhibited by the participants. In our opinion, this was one of the most beneficial outcomes of these workshops; people who perform similar jobs in two seemingly different work environments found out that they had many interests, goals, and problems in common, and could benefit on a daily basis from the experiences and ideas shared by others at the workshop.

The positive attitude resulting from the workshop carried over at least until the 3-month post-workshop evaluation we solicited from all participants. Of those who responded to our questionnaire, over % report increased enthusiasm for their job as well as for enrichment and training, which they attribute to the workshop. Clearly this is a direct benefit to their institutions as well as to participants. Alumni also report numerous benefits of the workshop applicable to their individual situation. These include improved documentation of enrichment, improved compliance with regulatory goals, improved abilities to monitor animal health, and improved communication among colleagues and to administrative personnel. Participation has also led to increased awareness among workshop alumni of situations in

which enrichment and/or training could be applicable. % of respondents also report that the use of techniques learned in the workshop has made the primates that they work with "more manageable". In most instances, this was the result of positive reinforcement training techniques, and represents a benefit to both primates and those working with them.

The post-workshop evaluations have also revealed the limitations of the program. Few alumni report adequate time available during their work hours to implement the enrichment/training ideas that they have developed. However, several currently volunteer unpaid time to accomplish enrichment/training tasks. The workshop cannot directly affect this issue of time availability, but particularly in the case of training, we continue to emphasize the long-term net benefits of short-term time investments. Similarly, few laboratories and zoos have the resources (personnel, supplies, money, etc.) to fully implement the plans developed in a workshop setting that is not limited by such practical constraints. Problems may also remain unsolved if positive reinforcement training, in particular, is not properly and completely implemented.

## CONCLUSIONS

The quest continues to discover innovative, yet practical ways to provide optimal care for captive primates. It is our goal to make the PTEW a valued contributor to that process by providing the opportunity for motivated professionals to share ideas, discover options, develop action plans, and identify strategies for implementing these plans at their facilities. For an enrichment program to succeed, support is critical, up and down the chain of command. How to achieve that support and win over the skeptics and critics on all levels is the biggest challenge. The PTEW provides one forum to address those issues and generate potential solutions.

As for the future, we want to see enrichment programs grow, along with greater communication and interaction between zoo and laboratory personnel. Some ideas include: more PTEW's; an advanced Workshop for those interested in another layer of education; regional enrichment newsletters; greater participation in existing newsletters like "The Shape of Enrichment" out of the San Diego Zoological Society; and special enrichment symposia at conferences like AALAS, AAZPA, and AAZK. There's a lot to learn, to do, and to be gained by nurturing the enrichment movement. Success in this effort is a win/win situation for everyone: the animals, the people, and the institutions.

**TABLE 1 PARTICIPANTS**

LABORATORY FACILITIES		ZOOLOGICAL PARKS	
Position	Number	Position	Number
Caregiver	11	Keeper	17
Technologist	4	Trainer	1
Supervisor	10	Curator	5
Veterinarian	7	Veterinarian	1
Director	1		
average experience = 9 years		average experience = 8 years	