

## **CONVERTING ELEPHANT PROGRAMS TO PROTECTED CONTACT**

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Since 1991 when we first introduced our San Diego Wild Animal Park project at the AZA National Conference, protected contact has become established as an alternative system for managing elephant behavior. In the last four years many significant advances have occurred with the use of protected contact. Through improved facility design and responsible training techniques, risk to keepers has been significantly reduced. Husbandry and veterinary procedures are routinely carried out, including foot work, skin care, and blood draws, and some illnesses and injuries are being treated. Animals are being moved between enclosures and chained when necessary. Large groups of animals are being managed, including groups with both bulls and cows, introductions are being carried out, and a successful birth has even occurred. Elephants are being worked for physical and mental stimulation, being taught new behaviors, and are participating in public presentations.

However, some programs are much more comprehensive than others. As in any management option, how effective a system protected contact ultimately becomes depends upon the clarity of the institution's goals, the resources made available, and the skill of those doing it. Because of those factors, the quality of protected contact being conducted today varies greatly from one zoo to another, as does free contact.

Active Environments has been or is involved in the conversion of eight systems from free to protected contact working directly with more than 25 different elephants, and affecting the handling of 10-15 additional elephants. In six of those programs we designed and coordinated implementation of all or most of the process. We have varied how we carried out the conversion based on the specific needs of each institution. However, every protected contact system we developed was designed to address two fundamental goals: keeper safety and animal welfare. Both are paramount, and one shouldn't and needn't be sacrificed for the other. In converting any system to protected contact there are three stages: preparation, transition, and system development. Within these stages there are various options and requirements. This paper will review our experience.

### **PREPARATION**

Careful preparation is necessary to convert a system to protected contact safely and responsibly. We see three areas that must be addressed: facility modifications, human resources, and program assessment.

#### **Facility Modifications**

Facilities drive much of what you can do in a protected contact system. This is the first and most important area to address. Unfortunately, we are still in the infancy of facility design for protected contact systems. However, certain things are clear. All animal facilities, both holding and exhibit areas, must give keepers sufficient safe, shielded access to the elephants to conduct all elephant program activities. It can be done simply or it can be done expensively, but it must be done right. Specific areas to address include:

- 1) shielding in holding areas that allows staff sufficient access to animals to carry out all necessary

husbandry and veterinary procedures including chaining in a safe manner and to interact with single or multiple elephants;

2) gates that are preferably hydraulically controlled, or at least are able to be manually operated from outside the exhibit;

3) shielding and/or space between adjacent keeper and animal areas that allows keepers to work and move through the area without the risk of being grabbed;

4) access points around exhibit areas that allow staff to: safely interact with animals, control their movement, separate individuals, access multiple animals, do necessary husbandry behaviors, and monitor behavior;

5) sufficient keeper access and field of view to facilitate the movement of elephants between enclosures;

6) holding areas that allow multiple options for separate or group housing of elephants.

Even minor details in facility design are important. Some examples of such details are: sizing and location of ear holes so that the ears of different sized animals actually fit through the holes; providing platforms that give staff safe, easy access to elephant ears, eyes, and backs; and designing foot holes that comfortably accommodate an elephant's foot during protracted foot trims and are large enough to allow some sideways adjustment of foot position without smashing human hands. These and other relatively minor points of facility design can have a major impact on the ease or difficulty of carrying out protected contact husbandry activities.

Institutions can expect that the financial resources will be equal to, or even greater, than those required by a free contact system. Equipment and facilities will still need to hold up to an elephant, and since protected contact is a young, evolving system, we will likely be making improvements and retrofitting facilities for some time to come.

### **Human Resources**

There seems to be a mistaken belief by some that a protected contact system requires fewer human resources than a free contact program, particularly concerning the level of staff skills. This is a false assumption that can jeopardize the fundamental goals of the program. Personnel, in numbers comparable to those of free contact programs, must develop skills that far exceed the ability to shape behavior using positive reinforcement exclusively. In fact, equally important to animal welfare are such skills as: knowledge of the natural history and biology of elephants; knowledge of the individual elephant; knowledge of group social dynamics; and the ability to interpret elephant behavior well enough to read and respond appropriately to even subtle changes in behavior. The full range of these skills is required to address the subtle yet critical social issues such as dominance, submission, competition, and the resultant not-so-subtle aggression that can be directed at handlers or other elephants.

Skilled free contact trainers who are willing to shift to a protected contact program are invaluable because they bring most of those skills with them. Individuals highly skilled in positive reinforcement training are also important. It is worth the effort to help these two, often disparate, types of people to coalesce into a consistent, competent, flexible training team. Creation of a team that can integrate all

these skills will be the difference between animals that transition smoothly and those that find it a frustrating, confusing, stressful experience.

Finally, protected contact can only protect keeper safety if staff is skilled enough to recognize and respond appropriately to potentially dangerous situations. If people with these diverse skills are not available, their development must be a major component of the conversion plan. This may include allocation of additional staff and the assistance of outside experts who can provide those skills that staff currently lacks.

### **Program Assessments**

How a protected contact conversion is conducted depends on the individual animals in the program, and how specifically you want to manage them. The facilities built, the personnel who run the program, and the method by which the change is made should all revolve around these issues. Carefully assessing what kind of elephant program you want now, and in the future, will save much time, money, and retrofitting later. If bulls are wanted, certain facilities are required. Dangerous cows require a greater degree of shielding than do tractable, cooperative cows, but what happens if a tractable cow becomes dangerous? How animals will be housed at night - all together, in smaller groups, or separating them at night - must be anticipated. Staffing requirements will also vary. More dangerous animals require more skilled personnel, just as in free contact. Breeding programs, research or entertainment will require more staff than a basic display and maintenance program. So, it's best to look at what you have, and what you want, and plan accordingly.

### **TRANSITION**

Each of the several ways to convert a system to protected contact have their costs and benefits. Our experience has involved four basic methods: "cold turkey," phasing personnel while maintaining both systems, phasing animals, and phasing animals and personnel.

#### **"Cold Turkey"**

This method works just like it sounds - on a certain date the change is made. The ankus is retired, keepers no longer go in with the elephants, and there is no turning back. Despite its drawbacks, this option is most practical for many zoos because it is the least resource intensive. All facilities and resources are directed toward one option only. Necessity can drive this decision, as with elephants that become too dangerous to handle in free contact. If a zoo lacks facilities and/or personnel to manage animals in two different systems, or if managing them together is best for the elephants, the management style required for the dangerous elephant becomes the management style for all resident elephants.

Taking a system to protected contact "cold turkey" is a viable option, with immediate safety benefits for staff. However, for a time the animals are vulnerable. Once in protected contact, free contact husbandry and veterinary procedures are no longer possible. So, if an animal needs special care before comparable protected contact behaviors are available, the animal is compromised - unless a collective decision is made to break the rules and revert to free contact techniques. However, such a return to free contact creates an ill defined but potential risk to staff. With dangerous animals, "cold turkey" conversion carries no greater risk to the elephant, since it is unsafe to access the animals in free contact anyway.

### **Phasing Animals**

If facilities and resources are available, it is possible to maintain two systems simultaneously by continuing to work some elephants in free while moving others to a protected contact program. This is different from trying to combine free and protected contact for the same animals with the same personnel. We still believe very strongly that that is a potentially dangerous situation with inherent risks that are impossible to quantify accurately. Phasing animals works well in a situation where there is a bull or cow that is already out of free contact. Only benefits are gained for such an animal, since the use of protected contact techniques would improve elephant care and welfare. Furthermore, phasing animals is useful in building staff skills. Keepers gain experience with the first animal that better enables them to train important husbandry behaviors quicker, and to anticipate and address problems more effectively in subsequent conversions. These increased skills will result in a shorter period of vulnerability for the animal during the transition.

### **Phasing Personnel**

Once again, this option is dependent on sufficient facilities and resources to maintain both free and protected contact simultaneously for a period. However, if it is possible, it provides the smoothest and safest transition for the animals. In this method, two sets of keepers or trainers are required. Functionally, animals continue to be maintained in free contact by one group of keepers. Then, during specific training sessions, a different set of keepers or staff members begin training the animals in protected contact techniques. Never do trainers cross back and forth from one system to another with the same animal. This is essential to protect the integrity of the free contact system and the safety of the free contact trainers. The care and management of the elephants is converted to protected contact only when they have learned necessary control, husbandry, and veterinary procedures. This minimizes the period of vulnerability the animals are exposed to. It is also beneficial to staff skills development. By the time the animals are converted to protected contact, part of the staff has had the time and experience to develop good basic training skills and problem-solving capabilities.

### **Phasing Animals and Personnel**

In the largest of systems, where logistically chaos would be created by conversion of all of the staff and animals simultaneously, phasing of both animals and personnel is best. The Bronx Zoo is the best example of this situation. A small team of managers with elephant experience started one pair of their six elephants on protected contact while all six animals stayed with their best handlers in free contact. When the decision was made to convert these first two animals to protected contact, the managers moved on to begin protected contact with the second pair of elephants. The free contact staff then learned protected contact by taking over the handling of the first pair of elephants that were then competent in basic protected contact behaviors. This same free contact staff continued to handle the other elephants in free contact. Currently, four of the six elephants are completely in protected contact, and managers are working to convert the last pair.

### **SYSTEM DEVELOPMENT**

Converting elephants to a protected contact program is only the first step. It is not enough to manage elephants with only basic care and husbandry practices. That may address keeper safety issues, but it does not adequately address animal welfare. Welfare may be a difficult concept to define, but optimal care should be the only acceptable standard by which to judge it. Therefore, there are several elements of the program that must be developed over time.

### **Meeting Animal Care Standards**

A good basic protected contact program begins with training control behaviors like responding to a target, stationing, and controlling physical movements through the enclosures. It grows into a system that provides all necessary foot and skin care, as well as reliable sample collection, and cooperation with veterinary diagnosis and treatment. The animals are comfortable and relaxed with people touching, probing, and examining as needed. If an ERC is in use, animals are fully desensitized to being worked with and restrained in it. The program works continually not only to expand the range of options for treatment, but also to provide a solid preventative health program. A basic protected contact program that falls short of this is not adequately addressing animal welfare.

### **Managing Social Behavior**

A basic program must also grow into a comprehensive behavioral system that can maintain a stable social structure in the elephant herd and between the elephants and their handlers. Advanced skills must be developed which allow staff to accurately monitor and constructively intervene in elephant social behavior. In a free contact system it is imperative to manage social behavior within the context of the work/training setting. In a protected contact system it is deceptively easy to ignore these issues because of the mistaken belief that keeper safety is not directly affected. However, it is a fundamental responsibility of protected contact elephant keepers to create a comfortable, reasonably stress-free life for all elephants. That demands that both overt and subtle indications of excessive dominance or submission be addressed *even in those situations outside the work/training setting*. This not only protects the welfare of the animals, but reduces risk to staff. Social problems ignored and allowed to fester will ultimately result in aggression that raises risk to animals and staff in even basic handling situations.

### **Addressing Psychological Well-Being**

An advanced protected contact system must continue to evolve and develop effective methods of addressing the psychological well-being of the elephants. One critical element, as it is in a free contact system, is to achieve a meaningful human/animal relationship. Protected contact may place some constraints on physical contact, but it also removes the barrier of sustained domination. Ultimately, the extent and quality of the human/animal relationship are up to the individual humans and animals to develop and maintain.

It is not enough to assume that exclusive reliance on positive reinforcement techniques automatically assures the well-being of the elephants. Incompetent, inconsistent use of positive reinforcement training can create a frustrated, confused animal. Some examples of this are rigid inflexible criteria for positive reward which fail to take into account changing circumstances; excessive physical demands; or trainer insensitivity to social or environmental reinforcers that powerfully motivate noncompliance with trainer's intended behavioral goals. Implementing positive reinforcement training poorly can lead to stress for the elephant for the simple reason that the trainer fails to see the problem. So, an advanced protected contact training system must provide a flexible, sensitive style of positive reinforcement training which adjusts to all of the available animal information to create a work setting for the animals that offers mental stimulation, encourages physical activity, and provides a rich repertoire of enrichment options.

### **Continuing Staff Development**

Any elephant management program will only be as good as the people implementing it. Therefore, to achieve an advanced protected contact system requires on-going staff development. An effective protected contact program requires more from staff than the ability to use a target and blow a whistle.

To effectively implement protected contact, staff must not only use positive reinforcement techniques effectively, but they must also be skilled problem-solvers and caregivers, who understand their animals and can manage the full spectrum of animal behavior.

To train and maintain critical husbandry and veterinary behaviors, handlers effectively employ desensitization techniques to teach the animals to tolerate new, scary, or uncomfortable stimuli. Without good desensitization skills, toleration of a blood draw, vaginal exam, or an extended foot trim is likely to be inconsistent and unreliable. The same skills are also critical in increasing the likelihood of accessing animals who are sick or injured and thus less likely to cooperate in procedures. By desensitizing animals to specific stimuli, a good trainer can encourage the development of a general increased tolerance of the unusual. Our observations indicate that overall the animals will react less fearfully to new stimuli and, if they do, are quicker to recover and continue working (Desmond & Laule, 1991). This may have significant implications for keeper safety since a study on elephant inflicted injuries indicated that attacks often came because of exposure to startling or unexpected stimuli (Bernirschke & Roocroft, 1992).

One of the greatest benefits of a positive reinforcement environment, is the freedom it affords animals to experiment with a broader range of behavioral responses because there are no negative consequences to experimentation. Skilled trainers enhance those benefits by consistently rewarding animals not just for overt correct responses, but for more subtle and subjective actions like "problem solving" a task, offering "creative solutions," and "trying" hard. These efforts will strengthen the enriching aspects of a protected contact program, and go to the heart of addressing the psychological needs of the elephants.

## **CONCLUSION**

No elephant program will function without the necessary resources, and protected contact programs require similar resources to those of free contact programs. Zoos must provide the adequate facilities, well-trained staff, and proper management support on an ongoing basis, or the program will fail. Converting programs is just the first step. We have to work at getting good at protected contact if we want it to benefit both the elephants and their handlers. To protect the people, we must not get careless. Protected contact is safer, but it's not "safe". To protect the animals, we must develop the advanced skills that will carry our programs far past the point of basic feeding and care of the animals from outside the yard. We must develop the skills to maintain the social equilibrium in our elephant herds, and to meet the psychological and physical needs of each individual within those herds. In short - if you're going to run a protected contact program, run it right. If not, the animals will pay the price.

## **REFERENCES**

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