

## **PROTECTED CONTACT - BEYOND THE BARRIER**

**Gail Laule and Margaret Whittaker**

**Active Environments Inc.**

At the 1991 AZA Annual Conference in San Diego, John Lehnhardt reported some sobering statistics on the risks of working with elephants. Between 1976 and 1991, 15 people died in elephant-related incidences in North America. Six of those deaths occurred in the 2 ½ years between 1989 and 91. An elephant handler was 3 times more likely to die on the job than someone in the next most dangerous occupation, coal mining. If you didn't like those kind of odds, you could reduce your risk by joining the police force or fire department. In that same paper, John identified 3 elephant management options available to zoos: free contact, confined contact, and no contact. At the time, only 6 zoos had functioning restraint devices, and no contact was considered impractical, which left free contact as the only viable option for the vast majority of zoos. However, all the deaths had occurred in a free contact setting, which created a dilemma for zoos looking to reduce the risk of captive elephant management. Coincidentally, at the same conference, on the same day, Active Environments presented a paper on the results of a 2 year project funded by the San Diego Zoological Society to develop an alternate system for elephant management (Desmond, Laule, 1991). It was a project that began with a concept document written in 1989 by Tim Desmond describing a new form of elephant management that he had named protected contact.

Between that AZA conference in September 1991 and September 2000, protected contact has grown into an internationally recognized system for elephant management. It is now being used by nearly half the zoos in AZA and is appearing in programs outside the US in growing numbers. It is taught in the AZA Principles of Elephant Management course, and is discussed and debated in a variety of forums including conferences, papers, listserves, newspaper articles, and television spots. Despite its acceptance and integration into modern elephant management, PC still manages to generate controversy, albeit a milder form than 9 years ago.

The purpose of this paper is to provide an updated perspective on the current state of protected contact, nine years after introducing it to AZA. As a starting point, we would like to take a closer look at the current AZA definition of PC- "Handling of an elephant when the keeper and the elephant do not share the same unrestricted space. Typically, in this system, the keeper has contact with the elephant through a protective barrier of some type, while the elephant is not spatially confined and may leave the work area at will". This is contrasted with the definition of free contact where the keeper and elephant do share the same unrestricted space, and confined contact where the elephant is spatially confined and handled through a protective barrier. The two primary elements in all these definitions are the physical location of elephant and keeper, and the presence or absence of a physical barrier. There is no reference to the tools, techniques, or human/animal social dynamics that distinguish one form of management from the other.

We raise this issue because in our travels to zoological institutions throughout the US and abroad, in our discussions with colleagues, and a review of the many articles, papers and commentaries on PC, there

appears to be a reoccurring thread of misunderstanding as to what protected contact is. References to PC in numerous writings out of Europe, continue to refer to it as a "hands-off" form of elephant management, and lament the loss of physical contact between keeper and elephant. There have been recent attempts within the AZA community to change the name of protected contact to "limited contact" and "segregated contact". The strongest feature of these alternate names is the emphasis on the separation of keeper and elephant, and the presence of a barrier.

We have encountered elephant management practices that are being called PC or "modified" PC, in which trainers simply move to the other side of the physical barrier and give commands to the elephant. In these situations, the trainer often still carries the ankus and uses an authoritative voice to give commands from this new position. Although some may consider this PC, we respectfully and adamantly, disagree. PC is not free contact conducted from the other side of a barrier. It is a separate and distinct form of elephant management. But, with a definition that focuses on keeper position and the presence of a barrier, it allows, and even invites, this kind of misinterpretation.

Whether good intentioned or not, our point is that all these actions, as well as the existing AZA definition of PC, are misdirecting the community at large from a true understanding of what PC really is.

### **Not Just a Wall**

Right now, we are going to make a very bold, seemingly outrageous, and irresponsible statement. We are going to tell you that protected contact can be conducted safely without reliance on a barrier. Furthermore, the keeper and elephant can share the same unrestricted space. Before we offer some specific examples of how that can be done, let us take a step back and review the objectives and methods that comprise PC.

First of all, PC is a system that has 2 equally important fundamental objectives, keeper safety and animal welfare. Protected contact does not consist simply of a keeper stepping outside of a barrier to be "safe", while otherwise continuing to direct the elephant as if still functioning in free contact. Enhanced keeper safety is one aspect of PC, but the keeper must now use the appropriate tools and techniques, and adopt a human/animal social relationship that is appropriate to this context, in order to truly conduct PC training. Only when these elements are incorporated into the process, is training going to satisfy the second fundamental objective, animal welfare.

### **Tools of PC**

The tools to which we refer are simple: a conditioned reinforcer like a whistle or clicker, targets of varying lengths, and food reinforcers. These are the appropriate and necessary tools required to implement PC. The primary technique and basis of PC training is positive reinforcement. Operationally, we are gaining the elephant's voluntary cooperation in the training. To quickly review terminology, reinforcement comes in two types, negative and positive. Both types of reinforcement increase the chance that a behavior will occur. Negative reinforcement does so by escape-avoidance methods. For

example, present the ankus to the foot, and the foot moves away from the ankus; the desired behavior of moving the foot is achieved. The 'negative' aspect of the definition comes from the removal of the stimulus when the behavior happens; the ankus is removed when the foot is moved. Positive reinforcement increases the chance a behavior will occur by providing something the animal wants, such as food rewards. The target works differently than the ankus in that the elephant moves towards it to achieve the correct behavioral response.

It is important in PC to rely on the use of positive reinforcement to achieve voluntary cooperation by the elephant, because that is fundamental to addressing animal welfare. In our paper published in Second Nature we looked at the potential and documented benefits of positive reinforcement training for the psychological well-being of animals (Laule and Desmond, 1998). These benefits include the opportunity to: work for food (Neuringer, 1969; Anderson and Chamove, 1984), achieve greater choice and control over daily events (Mineka et al, 1986), experience greater mental stimulation (Laule and Desmond, 1992; Kreiger, 1989); and experience other enriching results such as reduced self-directed behaviors, increased activity, and enhanced social interactions (Desmond et al, 1987; Bloomsmit 1992). Only by implementing a system that relies exclusively on the use of positive reinforcement training are these benefits likely.

In PC, the relationship between the elephant and trainer does not require that the trainer fit into the social hierarchy of the herd, and in fact, attempts should be made to diminish this type of relationship typically found in traditional training. In PC, it is no longer necessary, nor is it appropriate, for the trainer to be socially dominant.

Based on the objectives and methods of PC outlined here, we would like to suggest an expanded definition of PC: Protected contact is a system for managing elephants that uses positive reinforcement training as the primary method to modify behavior; directing the positioning and movement of the elephant is achieved through the use of targets. Keeper safety is achieved by elephant and keeper positioning relative to each other and to a barrier, which typically separates human and animal spaces. Trainers function outside the elephant social hierarchy and do not attempt to establish a position of social dominance.

### **Beyond the Barrier**

With this definition in mind, let's return to our previous statement that the criteria for PC can be met without relying on the barrier, and in the context of people sharing the same space as the elephant. To evaluate this statement, you have to understand how keeper safety is achieved in PC. First, when used properly, protected contact greatly reduces the risk of serious injury or death to those working closely with elephants. It does not eliminate the risk. Keeper safety is maximized by using the following three elements wisely: elephant position, keeper position relative to the elephant, and both human and elephant position relative to a barrier. It is the attention to all three elements that assure the greatest degree of keeper safety.

For example, the elephant is positioned in a lean in where his side is parallel to the barrier. In this position, the keeper can safely access almost the entire length of the elephant's body. An attempt to swing the trunk at the keeper must be preceded by the elephant repositioning, which gives the keeper time to step back. Even the best training in PC can't guarantee that the elephant will not leave position, so the keeper always maintains a means of escape. In another situation, the elephant is positioned directly facing the keeper. The keeper maintains a position relative to the elephant and to the barrier that keeps him or her out of the direct line of a swing of the trunk. In this case, the keeper would stand to one side of the elephant's head, with a vertical pole directly between them. If the barrier has horizontal bars that stop the trunk from swinging out, then the keeper could position more directly in front of the elephant. The point is that all 3 elements of safety are considered and used appropriately.

Now imagine the first scenario, only once in a lean, both front foot and rear foot are chained. At this point it is feasible for the keeper to enter the enclosure and access the elephant's rear and side and do so in relative safety. However, the keeper must adhere to the rules of keeper position and escape distance by always positioning him or herself in relation to the elephant in a way that avoids the trunk swinging or foot kicking out and allows easy escape. In the same fashion, once an elephant is restrained, with chains for example, a keeper could enter the elephant's space and completely avoid contact with the animal and accomplish some necessary task in the exhibit.

It's likely that many people would claim that once the elephant is restrained, we are now conducting confined contact, not PC. Again, we humbly disagree. In response, we would like to raise the question of why confined contact is singled out for definition and included with free and PC as an elephant management system? We would suggest that confined contact is not a system for managing elephants, but rather one physical context, out of many, in which we interact with elephants. It is impossible, and completely undesirable, to manage an elephant exclusively in confined contact. There are no specific tools or techniques associated with it. Furthermore, elephants are occasionally restrained and worked in both a free contact and PC setting. However, because each system has its own appropriate tools and techniques, confined contact will look quite different in each.

To return to our discussion, it is also possible in PC, using the 3 safety rules, to enter the elephant's space when the elephant is unrestrained. To do so in relative safety, there must be sufficient space between the elephant and the person, and the animal must be properly positioned. This can be achieved in a number of ways. The elephant is positioned by the trainer on a target with a front foot through a foot hole and at a sufficient distance to allow a keeper to enter the animal space and move a manual door. To reach the keeper, the elephant must first reposition by removing the leg from the hole, and then travel the distance to where the keeper is standing. As long as sufficient escape distance has been adhered to, the keeper should be able to safely exit the area before the elephant gets within close range. The elephant could also be put into a down or stretch to increase the repositioning required before the animal could move towards the keeper.

In a PC program, daily management of the elephants should not require that keepers share unrestricted space with the elephant. But if the need arises, it is possible to structure the handling of the animal to

allow that to occur. Since restraint by chaining is a recognized management tool in both free and PC, it would be beneficial to desensitize elephants to accepting people in with them while chained. This increases the usefulness of this tool, in a variety of circumstances, including responding to unexpected or emergency situations.

## **Conclusion**

Our purpose in presenting these scenarios is not, by any means, designed to encourage elephant staff to find ways to enter the elephant enclosure. In reality, good PC training from outside the barrier should meet all the normal daily management needs of a system, and most of the special circumstances that are encountered as well. Our point is that *it is not the barrier that defines PC*. It is the specific tools, techniques, and human/animal relationship, and adherence to the safety rules of PC that define this system. It is through these elements that we most effectively address both human safety and animal welfare objectives, which are fundamental to real protected contact. Changing or ignoring any of these elements results in a less effective program. We would caution that there is a cost to doing PC partway. There are difficulties and safety issues associated with trading an ankus for a target pole and attempting a "modified" free contact program. Similar, and no less critical problems result in trading a target pole for an ankus in PC. Just like free contact, protected contact is as effective as the skill with which it is implemented. Skillful implementation requires being true to the fundamental elements of PC.

## **References**

Anderson, J. and A. Chamove. 1984. Allowing captive primates to forage. In *Standards in Laboratory Animal Science*, Vol. 2. Potters Bar, U.K.: Universities Federation for Animal Welfare, 253-256.

Bloomsmith, M. 1992. Chimpanzee training and behavioral research: A symbiotic relationship. In *Proceedings of the American Association of Zoological Parks and Aquariums Annual Conference*, Toronto, Canada, 403-410.

Desmond, T. and G. Laule. 1991. Protected contact elephant training. In *Proceedings of the American Association of Zoological Parks and Aquariums Annual Conference*, San Diego, California, 606-613.

Desmond, T., and G. Laule, and J. McNary. 1987. Training for socialization and reproduction with drills. In *Proceedings of the American Association of Zoological Parks and Aquariums Annual Conference*, Portland, Oregon, 435-441.

Kreiger, K. 1989. The lighter side of training. In *Proceedings of the International Marine Animal Trainers Association Annual Conference*, Amsterdam, the Netherlands, 138-142.

Laule, G. and T. Desmond. Addressing psychological well-being: Training as enrichment. In *Proceedings of the American Association of Zoological Parks and Aquariums Annual Conference*, Wheeling, W. Va. 713-718.

Laule, G. and T. Desmond. 1998. Positive reinforcement training as an enrichment strategy. In *Second Nature*, ed. D. Shepherdson, J. Mellen, M. Hutchins, Smithsonian Institution Press, Washington, 302-313.

Mineka, S., M. Gunnar, and M. Champoux. 1986. The effects of control in the early social and emotional development of rhesus monkeys. *Child Development*, 57:1241-1256.

Neuringer, A. 1969. Animals respond for food in the presence of free food. *Science* 166:339-341.