

## Book review

ANIMAL TRAINING - SUCCESSFUL ANIMAL MANAGEMENT THROUGH POSITIVE REINFORCEMENT. Ken Ramirez. A John G. Shedd Aquarium publication, xiv + 578 pp. ISBN 0-9611074-9-9

Ken Ramirez is the current head of training at the Shedd Aquarium in Chicago. For many years, he has played an active role in the International Marine Animal Trainers Association (IMATA) as vice-president, president and in a number of other functions. In his function of head of training, he discovered that there is very little practical information available to help both starting and more experienced trainers in their day-to-day work. Sure enough there is a host of technical books on training techniques, as well as some very basic "How-to" books on training pets, but very little that is of direct use for professional exotic animal trainers. To fill this gap, Ken began collecting information from a variety of sources. The result is this book. It has become an odd mixture of original texts, sections from other books, columns and papers from newsletters and journals and abstracts from conference proceedings. The majority of borrowed papers comes from Gary Wilkes' book *A behavior sampler* and the IMATA publication *Soundings*. Despite this, the author has managed to turn this book into a very readable primer on animal training. Although the main focus is on training marine mammals, a number of training issues involving terrestrial species are discussed.

Every chapter starts with a detailed description of the topic and is followed by a collection of papers, illustrating the subject matter. The author outlines his reasons for including these papers. The practical nature of this book is highlighted by the many examples from the Trainers' Forum of IMATA's *Soundings* in which trainers from various backgrounds supply their view on and possible solutions for a specific training issue. It underlines the fact that there are usually multiple ways to tackle training challenges.

The first chapters of the book focus on the backgrounds of training. They address the various reasons for training animals, including husbandry, environmental enrichment, research and show performances. Also the importance of knowing individual animals is emphasized. It is essential to know the general natural history and behavior of the

species, as well as the history and peculiarities of each individual. In addition, some attention is paid to the trainer as a human being, with some attention for emotions, attitude and anthropomorphism.

In the chapter on basic operant conditioning, some of the terminology is explained as well as the concepts of positive reinforcement and the use of a bridging stimulus. Also shaping techniques are discussed. In this chapter, the author draws heavily on Pryor (1984). The importance the author places on this subject is underlined by the large number of papers included to highlight several aspects of reinforcement, shaping and behavioral problem solving.

Another subject, that is considered important, is husbandry training. The training of animals for voluntary cooperation in husbandry procedures is described in detail and is used to illustrate the operant conditioning techniques described earlier. The chapter is followed by a large number of papers, each illustrating the training of certain husbandry procedures. It includes quite a number of examples of non-marine mammals as well. Under the heading 'Advanced techniques and concepts' the author discusses a wide range of topics, including animal care staff management, secondary reinforcers, punishment and aversive stimuli and general misconceptions about animal training. In addition, schedules of reinforcement, recall and 'delta' signals and chaining of behaviors are discussed. As a result of this, this chapter is a bit like a collection of topics that could not be placed anywhere else. The treatment of secondary reinforcers is rather brief and relies on a number of included papers. Unfortunately, this makes the issue somewhat confusing, since some authors define secondary reinforcers as conditioned reinforcers (stimuli, that have acquired a reinforcing value by pairing with a primary or unconditioned reinforcer), following the standard operant conditioning terminology (Holland and Skinner, 1961), whereas others define any non-food reinforcer as a secondary reinforcer. The IMATA Training and Behavioral Terms Glossary (included in this book as Chapter 14) leans towards the former, but it leaves room for alternative interpretations. The treatment of reinforcement schedules is rather brief in this chapter, focussing mainly on variation in types of reinforcers. The various flavors of intermittent reinforcement are only discussed in some of the additional papers.

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The next section of the book deals with problem solving. A very specific and potentially dangerous problem, aggression, has its own chapter. The introduction is again fairly short, but is followed by a number of papers that each highlight causes of aggression (social, hormonal, learned) and provide techniques to deal with aggression in a variety of situations. This chapter is followed by a 'tool set' for the analysis of behavioral problems. It also discusses possible approaches that can be used to find a solution.

Chapter 12, 'Complex Training & Modern Applications' is a recap of the previous chapters and it applies the techniques discussed earlier to some specific training situations. These include interactive programs, protected contact training (especially useful for dealing with large or potentially dangerous terrestrial animals) and research training. It is mainly a collection of case studies, but each case highlights a common training challenge. The species discussed include dolphins, sea lions, manatees, elephants, rhinos and dogs.

The book ends with some pointers and useful addresses for those who would like to become professional trainers and with the full text of the IMATA Training and Behavioral Terms Glossary.

In conclusion, this book is a valuable resource for animal trainers. It provides a lot of practical information and its "learning by example" approach makes it easy to read. The collections of papers provided with each chapter illustrate the issues discussed clearly. The selection that Ken has made

provides a wide range of issues and viewpoints. This emphasizes the open-mindedness required for good trainers. The drawback is that you need to have a basic understanding of animal training to be able to filter out the information you need. This book is not really a "How-to" book on becoming an animal trainer for complete novices. As a study guide for trainee-trainers and as a reference for experienced trainers, this book is a unique resource. It should be on the required reading list for all animal trainers and animal care staff and should be available in the animal staff quarters of every zoo and aquarium.

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