

Africa and 300 in India, and some biologists fear the species will be exterminated from the wild well before the end of the century – all the more reason for zoos to press onward with public education and with spearheading conservation measures.

A zoo/aquarium setting is a wonderful space to explore traditional and new interpretive techniques, adapted from museums, art galleries, and nature and science centers. Combining live animals in naturalistic backgrounds, themed trails, fossil and human artifacts (real or images), interactive games, videos, computer stations, and other concepts add so much more to a facility visit. They intrigue various age groups and help attract repeat visitation because there is always something new to see and do. As a former curator and director of a major provincial museum and a national nature center, I have seen how successful an exhibit can be when augmented by exciting supportive materials and techniques.

Zoos and aquariums also have an enviable interpretive advantage in that they can show living, active species (not just images and objects) – the next best thing to being in the wildest places on earth. Visitors to the new exhibit at Assiniboine Park Zoo will not only marvel at a lion family, but will learn so much more about these amazing cats. After all, lions were formerly, and still are, found outside Africa, and in recent prehistoric times (until 11,500 to 10,000 years ago) they were part of Canada's native fauna, competing for big-game prey with the sabretooth cat (*Smilodon fatalis*), the American cheetah (*Miracinonyx trumani*) and its close relative the puma (*Puma concolor*), and with the growing population of recent human immigrants from Asia.

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## THE NEW INTERNATIONAL ACADEMY OF MAMMALIAN WELFARE AND EDUCATIONAL PSYCHOLOGY

BY MARTHE KILEY-WORTHINGTON

With growing consumerism and human population, less and less of the world remains wild. Even when large mammals are in nature reserves or national parks, they are becoming more enclosed and restricted (in e.g. South Africa, where almost all parks are enclosed). Where there is a conflict of interests between humans and animals for land use, it is generally humans' interests that trump. Consequently, if large mammals are to survive and retain their uniqueness, it is increasingly necessary to develop new ways of keeping, breeding, handling and teaching many species in different types of captive and semi-captive environments. Although most people involved with zoos know this, it is not often of top priority in their mission statements (Patrick *et al.*, 2007). But the question remains, how can it be ensured that captive animals have a life free from distress, and, further, a life of quality which is at least as good as that in the wild, and how can we measure this?

The welfare of all animals can be seriously compromised by their home environments and by their handling and teaching. It is often a combination of these which, when badly done, causes animals to become dangerous: we know this from many examples. Despite the growing interest in improving the environments for large captive mammals, there are at present no universally recognised qualifications which marry theoretical with practical knowledge of how to guarantee a high quality of life for captive animals. There are, of course, many opinions, folk beliefs, preconceptions, dogmas and trial-and-error discoveries.

Many zoos are considering these questions, and some have developed their own particular courses on ways of fulfilling particular species' needs, such as environmental enrichment programmes. Some zoos also run practical courses on handling large mammals, particularly elephants (Reichenbach, 2006; Rocroft, 2007). Some universities (e.g. Edinburgh, Exeter) and other institutions worldwide run theoretical courses on animal welfare science and on learning theory. But, to date, there is no universal course encompassing all the current knowledge and techniques in the sciences of animal welfare and animal educational psychology both theoretical and practical. Now, the Eco-Etho Research and Education Centre (Centre d'Eco-Etho Recherche et Education – [www.eco-etho-recherche.com](http://www.eco-etho-recherche.com)) is proposing to start an International Academy of Mammalian Welfare and Educational Psychology with the role of bringing together all the relevant current ideas, critically assessing them and putting them into practice.

The major aim of the Academy's courses is to develop world-recognised qualifications for those professionally involved with large mammals, in order to ensure that the animals under any form of human jurisdiction do not suffer and that, in particular, cooperative contact, handling and teaching is practised to

ensure better safety of both the animals and the handlers. The first-level qualification will be for those who are currently involved with large mammals (e.g. keepers, trainers, handlers, wildlife reserve and zoo managers, veterinarians, animal capture organisations, animal welfare professionals, etc.). It will give a simple introduction to animal ethics and moral obligations in terms of animal keeping and teaching, covering both historical and modern positions. It will continue by outlining methods of measuring distress and suffering, followed by how to assess the needs of particular species and individuals as a result of lifetime experiences. How to improve the environment for different species and put these ideas into practice with the available facilities will then be demonstrated and discussed.

The course will move on to learning theory: types of learning, when and how to use them, and the importance of the teacher's involvement, leading to the rules for good handling and teaching. These are based on an understanding of both the theory and its practical application in many environments. It will discuss many of the methods used today by practitioners, and the strengths and weaknesses of their approaches (e.g. desensitization, zero, protected and unprotected contact, how, why and when to use them, target training, use of body language, gestures, voice, clicker training, etc.). The emphasis will be on the importance of improving handling to ensure safety and ease of management, and how, when and where to develop cooperative teaching in order to help animals fulfil their cognitive needs but also to do useful work. Practical classes (e.g. what type of contact and how with different individuals, what, why, where and how to teach different mammals) will be a large part of the course. Graduates will thus have a strong practical as well as theoretical background, although they may benefit from further experience.

It is becoming increasingly important that internationally recognized qualifications are developed and used in order to ensure, among other things, that inappropriate arguments concerning banning of particular species in any form of captivity do not become the norm (an example is the recent decision in India to ban the keeping of elephants in zoos). It is certainly true that animals have suffered – and continue to suffer – in zoos and other forms of captivity, but this is not of the nature of captivity but rather because it has been practised badly. Today, by using our updated knowledge, it is possible to ensure a life of quality in captive mammals, if it is well done. This knowledge needs to be widely disseminated to all involved, while further research continues.

There is in many countries an interest in using traditionally wild, as well as domestic, animals for tourism (e.g. riding elephants, walking with lions, dolphin and whale displays, riding horses among wild animals, etc.). Many traditionally wild animals are also being used to help humans with particular work – Cape buffalo pull ploughs at the Veterinary Services farm in Zimbabwe, elephants in Imire Game Park, Zimbabwe, plough, transport heavy equipment, maintain roads and make dams, eland are used for milk production in the Ukraine, zebra for riding in Kenya, elephants for diagnosing cancer in humans or finding mines in South Africa, and many more.

Traditionally wild but well-handled animals can also be used as 'wildlife ambassadors' for conservation (Kiley-Worthington, 2005), bringing a real-life experience of the animals to poor or underprivileged people to interest them in wildlife conservation – as when several well-handled and trained animals were taken out into poor residential areas of Johannesburg such as Soweto (pers. comm., Johannesburg Zoo, 1999).



*Walking a white rhino in free contact in a South African reserve.*

Large mammals continue to be popular and perform to entertain humans in theatres, films, circuses and zoos, despite activists' efforts to ban some of these activities. But using large mammals in any of these ways can only be justified if (a) the animals do not suffer or show distress, (b) all their species and individual needs are met (physical, social, emotional and cognitive), and (c) we can therefore consider that they have a quality of life at least as good as that in the wild (which has considerable disadvantages from the individual's point of view) (Kiley-Worthington, 1990, 1993).

Close contact with other mammals can profoundly enrich the lives of those who have to do with them, because experiencing these others' world views and beginning to better understand them helps people to look at the world in a different way. This can help develop tolerance for different points of view, better mutual understanding, better personnel management, and possibly even international relations. Just think about the things you could get done with happy elephants!

At present understanding and catering for all the needs of different species is not often very seriously considered. Also, there are many conflicting ideas on how, in practice, to train large animals. As we know, handling and teaching may be done badly so that both the animals and the humans suffer (they may even be injured or killed), and sometimes the animals end up being destroyed, not because they are inherently aggressive or dangerous, but because they have been taught to be dangerous by bad keeping, handling and training.

The security of those handling and teaching the animals, or witnessing and experiencing them, is central. In order to ensure that the animals are reliable

and the risk of accidents is low, one of the most important factors is that the animals remain relaxed and calm, and are not performing as a result of being frightened, or to avoid pain or violence. The objective should be that they perform their various tasks because they want to, in order to give themselves and others pleasure. Many of the ideas governing the best of cooperative animal handling and teaching today are based on techniques and approaches used in human educational psychology (Kiley Worthington and Randle, 1998).

The International Academy of Mammalian Welfare and Educational Psychology has been offered premises in South Africa, and will work in conjunction with organisations there. It is a joint venture between the Centre d'Eco-Etho Recherche et Education in France and the Knysna Elephant Park ([knysnalephantpark.co.za](http://knysnalephantpark.co.za)) in the Cape. It will run its first courses at the end of 2010 at various zoos in South Africa, and courses for those involved with elephants at different locations. The academy will call on both local expertise and talent and internationally known experts to teach and contribute to research, and will become a world centre for discussion. The present team consist of renowned scientists, philosophers, psychologists, animal handlers and teachers who have many years' experience in teaching and research in the theory and application of animal welfare science and animal educational psychology.



Riding elephants at a reserve near Knysna, South Africa.

A further aspect of the academy will be to demonstrate in practice how local materials and methods can be used to ensure that environmental demands are

low and the materials required mainly produced renewably on site (e.g. food for the animals and humans, renewable energy and water conservation, building materials). In this way the students will acquire information on how to live with a light carbon footprint in our ever more environmentally threatened world.

The first five-day course is for local people, and for those from zoos and other animal enterprises overseas. The latter can also take advantage of a guided safari to see many of the large African mammals in South Africa and Botswana. One-year courses are in the process of development, in which individuals will have several courses on site but – since most of them will be in employment – continue studying by Internet correspondence, perform practical projects and write theses with the help of personal tutors and professors, before the final examination with world-renowned external examiners in both theory (written or oral) and practice.

Any interested enterprises or individuals, either potential students, consultants, or teachers, can contact either the centre ([marthe@horseridingfrance.com](mailto:marthe@horseridingfrance.com)) or Knysna Elephant Park ([info@knysnalephantpark.co.za](mailto:info@knysnalephantpark.co.za)).

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