

ZOO EDUCATION - Should The Focus Be Biological Science And Zoo Animals?

John Hopgood Senior Education Officer -Adelaide Zoo South Australia

Email: jhopgood@oac.schools.sa.edu.au

The World Zoo Conservation Strategy considers.. education to be "An Essential Conservation Task" (page 17, sub-chapter 4.1). A further eleven recommendations are made. The discussions about each of the recommendations are little more than observations about zoos and sometimes statements of intent, most of which are not contentious (4.1-4.6 and 4.9-4.12).

However sub-chapter 4.7, "A Variety of Biological Themes Can Be Explained by Zoo Education" appears too narrow an approach for two reasons. In sub-chapter 4.1, there is the recognition of the importance of environmental education, a holistic approach to conservation, which is not reflected in sub-chapter 4.7 and there is no recommendation for social themes (political, economic, religious etc.) to be incorporated into zoo education.

Sub-chapter 4.8, "Conservation Education: A Specially Important Element of Zoo Education", besides reinforcing the focus on biological themes, also focuses attention on zoo animals, particularly the threatened species rather than on biodiversity. This shifts attention away from equally important areas of conservation such as genetic diversity and ecosystems.

Below are listed some principles for effective zoo conservation education which present an alternative, more holistic view to those in the World Zoo Conservation Strategy and which reflect, in my opinion, current environmental education philosophy and practice.

The knowledge content must be about the human and natural environments.

Conservation is a process that involves people, it does not occur in a social vacuum. People make decisions (eg. the IUCN classification system) about species facing extinction. They undertake the necessary action such as, *ex situ* breeding programs. It is most often a landowner who is affected by an *in situ* conservation activity and it is the general public's increased awareness and behavior that zoos and other conservation organizations aim to modify.

Knowledge about the natural environment should focus on the processes that support it, the interrelatedness of these processes and the vulnerability of the natural environment to human impact.

People, before they can act, need to have an understanding of what processes operate in the natural environment. They need to understand that these processes support the diversity of life on Earth, including themselves. They need to understand that their, and

others', actions in one area can have impacts elsewhere. Only then do they have the information to enable them to behave in a responsible manner.

Knowledge about the human environment and how it is maintained at a cost to the natural environment. This cost varies with the level of technological development, history and culture (religion, science, politics etc.) of a society.

Individuals need an understanding of the context within which people, organizations and governments perceive the natural environment and act, to succeed in their efforts to conserve the natural environment. For example, politics impacts on every area of human life and without a knowledge of the past and current political scene, the processes operating in the society and how to influence them, any chance of influencing pressure groups and the government will be very limited. Issues such as consumerism, the media, the divide between rich and poor, religious beliefs, level of education, scientific paradigm, attitude to living things, the impact of and on indigenous peoples, etc. will need to be considered.

The development of practical, technological, social and political skills to enable people to engage in the processes required for the conservation of the natural environment at the individual and community levels.

A person is at a disadvantage in adopting ecologically sustainable practices, in gaining and evaluating information, in participating in discussions and influencing others about conservation issues without these skills. He/She will have a limited understanding of the role of government in setting social and environmental policy, how government is often the arbitrator in disputes and limited in its response due to pressure groups representing the dominant mode of production of goods or global trends, and so on. It is possible for an individual to be manipulated by others without a conservation ethic.

The development of socially and ecologically constructive behavior and attitudes.

The focus must be on the sustainability of the natural and human environments. However, in addition to scientific, political, technological and social skills, constructive skepticism must be fostered to enable a critical analysis of the political process, social mores, technological innovations, scientific developments, conservation action by others and so forth.

A sense of optimism for the future.

The many problems that the natural environment faces and the seriousness of some can be overwhelming. It is therefore important that a rational and optimistic approach be employed.

Done in partnership with people.

It is important to avoid creating certainty for a given course of action because our lack of comprehensive knowledge of the natural environment and the vagaries of human behavior mitigate against it. It is possible though to consider a range of feasible alternatives and invite people to participate in them.

Conservation of the natural environment is best done *in situ*.

This is not to say that zoos, botanic gardens and aquaria do not have a role to play in conservation. Rather it must be seen that they are part of a bigger picture. Habitat protection (the best means of conservation) and the maintenance of ecological processes (not the substitution of science and technology) must be seen as the prime objectives.

So how are these principles to be applied in a practical way? Let me first state very clearly that the public conservation education programs and activities that a zoo conducts, are not a study of these principles. They have been formulated for the professional educator or the non-professional with an interest in providing coherent, balanced and comprehensive conservation education for a zoo's staff, volunteers or visitors.

Let me also state very clearly that such programs need to be interesting, enjoyable and appropriate for the learner in terms of their knowledge and skill level. Research tells us that people also learn best when they are challenged by something and when they are able to participate in the learning process.

However, it is not only important to get the mechanics right' for conservation education, it is equally important to dissect the content, philosophy, policies, bias, etc inherent in what is being provided. For example, to exclude the human element from a discussion about conserving an endangered species reflects a lack of a comprehensive approach or perhaps, cultural bias. If the human element is included, are all those who hunt such animals painted as criminals? Has there been a consideration of their culture? Do some hunt out of a cultural belief or a necessity to feed a family as they have always done? What message is conveyed about other cultures (our culture?) if broad, unsubstantiated comments about their part in threatening species are being made?

Is there any mention of environmental processes or is the natural environment viewed as benign? If processes are included, are they portrayed accurately? For example, extinction is often viewed as the 'bogey' in zoo conservation education. However, extinction *per se* is a natural process. Accelerated extinction due to human action is not and this is vital information for a scientifically accurate conservation education program.

Do we need to include ethics as part of conservation? Is it right for a small proportion of the world's population (the rich nations) to consume the bulk of its resources? Do we allow manipulation of genetic material in species without prior research about the likely impacts on the natural environment? Is there a way of , encouraging a relationship with nature... utilitarian, value for intrinsic worth, does it have rights to further a zoo's conservation objective?

Without people having an understanding of why the world around them is the way it is and then trying to move them to a pro-conservation position, without giving them the knowledge of how to legitimately get to that desired position, are we not setting the scene for discontent? By assuring them that *ex situ* conservation is doing the job of saving threatened species, what will be the impact when as time progresses, more habitat is lost and therefore even the charismatic megafauna do increasingly become extinct?

Are we in our effort to get people "onside" using the 'doom and gloom' tactic? Is conservation reduced to a problem that can be scientifically managed and perhaps even be solved by the application of ever more technology? Are we forgetting people in the equation?

These concluding comments, some of which have been garnered from other authors, will I hope, stimulate discussion amongst conservation educators. I also hope that they will be encouraged to critically review what is being done by them in the name of conservation education for the betterment of our home, and that of future generations, Earth. Lastly, I would greatly appreciate feedback from colleagues about the suggestions that I have presented above.