

The role zoos play in field conservation and their interaction with visitors

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Historically zoos were simply places of entertainment but today's best modern zoos embrace conservation as their principal objective. This case study of Perth Zoo explores how zoos are now becoming involved in grass roots in-situ (field) conservation, how zoos engage visitors in conservation and what the role of zoos is, in engaging visitors in wildlife experiences and conservation action.

Perth Zoo's purpose is "To secure long term populations of species in natural environments while engaging the community in global conservation action".

Perth Zoo has spent time in the development and articulation of its purpose which clearly defines what the Zoo does and can be used to inform operational and management decisions. It indicates that like many modern zoos, species conservation is a core function as well as engagement of the community and zoo visitors in conservation action.

Perth Zoo has been tracking its conservation effectiveness with Zoo visitors for several years. Visitors indicate that the Zoo is tracking well in its conservation achievement and is well loved within the community. The results of last years (2007) market research show the following percentage agreement with statements about the Zoo's effectiveness in species conservation (see table below).

Statement about the Perth Zoo....	% agree
Educates visitors about conservation problems facing wildlife	97%
Encourages people to be more conscious about conservation of the environment	96%
Looks after the quality of life of the animals in its care	97%
Has an important role in the community	99%
Directly supports the conservation of species at Perth Zoo and in the wild	100%

A consequence of this community sentiment is that there is a significant opportunity to build on this approval to engage visitors in conservation.

At Perth Zoo the conservation and community engagement core function can be divided into the following areas:

Threatened species conservation programs, ex-situ & in-situ

Conservation education agent - on site, off site and website

Research and knowledge about the natural world

Quality 'up-close' experiences with wildlife

Native Species Breeding Program

In addition to the zoo's exhibition collection which is based around regional and global species conservation programs, Perth Zoo also runs active breed-for-release programs for endangered native animals. Recognised nationally for its contribution to species restoration and support of biodiversity in the wild, over 1800 animals have been released after being bred at Perth Zoo. The Zoo has worked in partnership with the Department of Environment and Conservation (DEC) on species recovery programs for threatened Western Australian native species such as Numbats, Dibblers, Chuditch, and Western Swamp Tortoise (the world's most endangered reptile). In many cases the Zoo has researched and developed husbandry techniques to manage and breed these animals as little was known about their reproductive biology or behavioural characteristics. Innovative programs like pre-release predator awareness training for the Numbats are also conducted to improve chances of survival in the wild.

Conservation Medicine & Recovery Programs

Like many other zoos, Perth Zoo also works collaboratively with wildlife agencies in conservation medicine. Perth Zoo's veterinary hospital has been involved in the rehabilitation of sick and injured wild black cockatoos for many years. Of the 3 species of black cockatoo in WA, 2 are endangered and 1 is listed as vulnerable. In the 12 months from April 2007 to April 2008, 115 wild black cockatoos were presented to Perth Zoo for medical treatment. Many of the cockatoos had been hit by cars, others had been shot. After receiving initial treatment cockatoos stay in the Zoo's veterinary hospital for as long as necessary, which can range from 1 day to a couple of months. They are then handed over to the Black Cockatoo Rehabilitation Centre and if possible they are released back into the wild, often to the same area and flock from where they came.

The veterinary section of Perth Zoo also assists in conservation medicine research. In the 1990's, the DEC's celebrated recovery program for Woylies (also known as Brush-tailed Bettongs) resulted in their removal from the threatened species list. Today, however, the Woylie is facing its greatest challenge yet as researchers race to find the reason for a decline in their numbers and to save them once again from extinction. The rapid decline in numbers points toward a disease that is predisposing Woylies to predation through being weaker and more vulnerable. Collaborative research on the disease theory is being undertaken by Perth Zoo, the DEC and Murdoch University. Since Perth Zoo's involvement began, its veterinarians have played an integral role in establishing the disease investigation process and coordinating various aspects of the disease investigation in the field. Perth Zoo also cares for and treats sick or injured Woylies found at the study sites.

Research Program

Perth Zoo has an active research program with six main streams of research. The Zoo also has a Frog Breeding Research Program and an on-site Reproduction Biology Unit. The Frog Breeding Research Program is focusing on the reproduction and captive husbandry of frogs. A number of WA's 78 native frog species are threatened with extinction as a result of the impact of humans, Chytrid fungus and the potential invasion of the Cane Toad in the Kimberley. The Frog Breeding Research Program is aimed at developing successful captive breeding and management techniques for frogs. Working with common species such as the motorbike frog (*Litoria moorei*) and the roseate frog (*Geocrinia rosea*) has provided valuable information about husbandry, reproductive biology, growth, development and captive management for threatened species. By developing this expertise, the Zoo is in a position to provide a safety net for threatened frog species if their populations collapse in the wild as a result of disease or Cane Toads. The work being done at the Perth Zoo is something not previously done anywhere in Australia. From the work completed to date, the Zoo is adapting methods and now working with the more threatened frog species in the south west of Western Australia in the hope that we can make a significant difference to their conservation.

Visitor Engagement

The role of modern zoos in assisting in species conservation is however wasted if the issues that are contributing to species decline are not addressed. This highlights the role of the zoo in creating awareness and understanding of the issues contributing to species decline including habitat loss, introduced predators, climate change and land clearing.

How do visitors and the community at large find out about the work going on at the Zoo? Information on the programs described above is available on site through keeper talks, our volunteer guides, and signage at exhibition locations, as well as in our zoo publications, the zoo website, articles in the news media and community publications (magazines, community papers), our Zoo to You speakers programs and through formal zoo-based education activities.

The step from awareness and understanding to engagement and action is promoted strongly by Perth Zoo. Opportunities for engagement are promoted through activities for the community and other educators. This includes programs like the TiWest Night Stalk, a national community education program coordinated by Perth Zoo and aimed at encouraging members of the community out into nature to spotlight for wildlife. The information collected is sent to Perth Zoo where it is collated and provided to relevant conservation agencies.

In June 2007, Perth Zoo launched a fundraising program called Wildlife Conservation Action (WCA) to raise funds for the conservation of local and global threatened species in the wild. In its first year, the program raised over \$216,000.

Funds are raised in a variety of ways including donations, behind the scenes animal encounters, the sale of elephant paintings and fundraisers run by schools and businesses. The entire \$216,338 (administration costs for WCA are absorbed by Perth Zoo) raised in 2007-08 has been allocated to the following priority threatened species:

Conservation projects in Bukit Tigapuluh National Park in Sumatra, Indonesia

This unique national park is the only one in Sumatra with a complete representation of Sumatran mega fauna including Sumatran Elephant and the critically endangered Sumatran Tiger and Sumatran Orang-utan. Perth Zoo's financial support through WCA provides resources for wildlife surveys, habitat protection, research and the construction of an open orang-utan sanctuary at Bukit Tigapuluh to provide ongoing care for ex-pet or orphaned orang-utans that cannot be successfully reintroduced to the park. In 2006, in a world first, a Sumatran Orang-utan, born and bred at Perth Zoo, Temara was released into the protected Bukit Tigapuluh National Park as part of an orang-utan reintroduction program. Temara is doing extremely well in her new home in the forest and continues to be monitored daily.

Sun Bear conservation projects in Cambodia

Poaching and habitat destruction are major threats to Sun Bears and other bear species and, while efforts are being made to curb the illegal wildlife trade, conservation efforts are hampered by a lack of information on the species. The collection of data on these bears and their life in the wild is vital in assisting conservation efforts to protect bear populations in the wild.

African Painted Dog

Funds raised will help support conservation work with the threatened Painted Dog in southern Africa. The establishment of poaching patrols, a rehabilitation centre for injured painted dogs, release and translocation programs, community education and snare removal efforts has already seen the number of painted dogs in Zimbabwe increase from 300 to 700.

Tenkile (Scotts Tree Kangaroo)

The Tenkile is threatened by human population growth. Conservation efforts concentrate on working with local communities to establish hunting moratoriums and the development of alternative and livelihood strategies for villagers. This includes education program material for schools within the area. In 2004, a hunting ban on the Tenkile was established. Data has shown a 50% increase over a two year period since the ban was put in place.

Silvery Gibbon

This critically endangered primate is found only in the jungles of Indonesia on the island of Java. Wild populations are under threat from logging, the burning of forests for palm oil plantations and the encroachment of human populations.

Frogs

The 2008 Year of the Frog campaign aims to raise awareness of the worldwide amphibian extinction crisis and raise funds for amphibian conservation. One third to one half of the worlds 6 000 known amphibian species face extinction in our lifetime – the largest mass extinction since the disappearance of the dinosaurs.

Native fauna

Native fauna species recovery program coordinated by the Department of Environment and Conservation are trying to arrest the increasing threat of extinction to native fish, frogs, birds, reptiles and mammals. Many Australian species have already been lost and a further 346 species are threatened.

Perth Zoo visitors are made aware that if they donated the equivalent of the cost of a coffee a week for one year that donation could fund:

- food for 9 rescued orang-utans for one month
- up to seven wildlife village patrols in Papua New Guinea
- 2 anti-snare and radio collars for African Painted Dogs
- critical research into Chytrid Fungus
- 3 research huts at a wildlife monitoring site in Papua New Guinea
- 2 pairs of boots for a member of an anti-poaching unit in Sumatra or Africa

The cost of a member of a wildlife patrol in Indonesia is \$5000 per year.
The cost of a pair of boots for a wildlife patrol member is \$30.

Perth Zoo thanks everyone for their support of WCA to date. With continued community engagement, more conservation action can be taken and money raised to assist conservation in the wild.

With this level of visitor engagement Zoo's can continue to provide a window to the world of wildlife conservation through allowing quality up close wildlife experiences with species that are ambassadors for conservation.