

Abstracts

Amphibian Education Campaign in Latin America

Carmen Linares - Africam Safari

email: clinares@africamsafari.com.mx

Coping with the worldwide amphibian crisis, in 2006 Mexico began constructing their efforts on different areas in order to support the amphibian conservation initiative in the country. The first steps were done by the Mexican Zoos and Aquariums Association (AZCARM), who established specific objectives to develop the campaign.

Talking specifically on education spreading the information toward the general public on amphibian crisis was identified as one of the most critical objectives within the education campaign, and the needs of uniting efforts among the zoological institutions to take advantage of all the talented people in order to develop a successful education campaign.

Later on the Education Commission of AZCARM developed educational tools whose main characteristic was to show and offer different actions that regular people could do to help on amphibian and habitat conservation. At the same time the Commission reviewed and adapted educational proposals that were developed in other regions of the world.

Since the AZCARM's Amphibian Campaign was very successful both the proposal and all the education material was shared with the Latin American Zoos and Aquariums Association. Now a day different zoos has not only use the material but also has enriched and shared with others in the Association.

Hot Topic: How the Oregon Zoo is Addressing Climate Change

Anne Warner - Oregon Zoo

email: anne.warner@oregonzoo.org

The Oregon Zoo is focusing public and staff attention on the globally significant issue of climate change. The counterpoint to the complexity of the topic is the very real and relatively easy choices people can make in their daily lives to reduce their carbon footprint. From new graphics at the polar bear exhibit to monthly special events and from information on the website to reducing our own energy footprint, we'll share our experiences that involve every area of the zoo.

Amphibians: Jewels of Nature

Diana Marcela Vivas Ramos - Fundacion Zoologica de Cali

The Fundacion Zoologica de Cali has an amphibian exhibit that involces investigation and educational components for conservation. The educational proposal has simple language that goes hand in hand with the knowledge and value of the diversity of amphibians in Colombia and Valle del Cauca, and therefore with the importance of the culture. Through audiovisual experiences, the exhibit allows people to interact and learn about amphibians, their diversity, threats, and worldwide efforts for their conservation. We created and animated a visitors' guide, creating a richer experience at the zoo, while also informing people about the amphibian crisis. The exhibit also includes an amphibian lab. It's an experience that intergrates education and visitors communication needs.

Polar Bears Back at Rotterdam Zoo

Chris Peters – Rotterdam Zoo – past IZE President
email: c.peters@rotterdamzoo.nl

Rotterdam Zoo had Polar bears in its collection until 2000 but the exhibit did not meet the quality criteria Rotterdam Zoo formulated in its new masterplan. So the successful breeding animals were transferred to Karlsruhe Zoo in Germany which has a much more up to date Polar bear exhibit. But the public as well as many employees and “The Friends of Rotterdam Zoo” wanted the Polar bears back, so they started the “Polar bear Push Group”. Thanks to many donations and other support Rotterdam Zoo started to build a brand new Polar bear exhibit at the end of 2007 as one of its biggest 150th anniversary projects. This Polar bear exhibit forms part of the bigger biotope environment Arctica that Rotterdam Zoo is creating.

The Education Department was and still is involved in the whole process to guarantee the most comprehensive education input. During this process the relationship between global warming and the danger of extinction of the Polar bear was chosen as the red line.

We had some interesting and very intensive discussions about the position educators should take about the causes and effects of global warming. Do we follow Al Gore’s vision blindly by making use of this hype? Do we blindly use the outcomes of the reports of the Intergovernmental Panel on Climate Change (IPCC)? Or do we tell the much broader story about the never ending change of climate?

Soccer and Theater Plays in the Mobilization of the Public

Marcel Enckoto – Gilman International Conservation/Okapi Wildlife Reserve
email: marcelenckoto@yahoo.fr

During the last two years, the Education program of the Okapi Wildlife Reserve has experimented with two new methods in conveying conservation messages. Secondary school children have disseminated written mottos on the protection of the Reserve as a World Heritage Site as well as the preservation of its most threatened key species, including okapis, elephants, chimpanzees and leopards. These mottos are written on large flags that players exhibit in towns prior to competitions. These have created chances for radio interviews and generated comments among the public.

Another group of educators have specialized in performing theater in the central but most populated area of the Reserve. Immigration and the recent rehabilitation of the main road crossing the Reserve have increased the overall consumption of natural resources. Farmers have enlarged their fields in agriculture zones, cutting therefore the forest faster than ever; pygmies complain on scarcity of bush meat and price increase; gold and timber exploitation companies have appeared in the vicinity of the Reserve. Educators involve local people in theater plays to raise their awareness on the negative and fatal impact of illegal activities on sustainable use of resources.

Educating Students to Conserve Critically Endangered Asiatic Cheetah *Acinonyx jubatus venaticus* in Bafq Protected Area, Iran

Safura Zavarani H. - Iranian Cheetah Society (ICS)
email: safzav@gmail.com

As the last stronghold for the cheetahs in Asia, Iranian eastern deserts hold fragmented numbers of the species. Bafq Protected Area is one of the main refuges for the cheetahs in the country and was selected due to possessing the highest cheetah mortality due to human factors in order to establish conservation efforts between 2002 until 2008. Based on investigations conducted in the area, we concluded that there is a serious conflict between the predator and local people. Due to lack of necessary awareness about the species, local people often confuse it with other carnivores (i.e. leopard, wolf, and striped hyena) which are usually the main responsible of livestock loss. Moreover, the people sometimes consider the cheetah as an enemy to the human being. Therefore, students were chosen as the main target group for educational campaign because they would affect their families when they are educated. Accordingly, we could educate various social local target groups via the students. Consequently, a two year educational program was implemented for 900 local students. In this paper, the process of students’ educational program for forming small cheetah conservation groups in the area is illustrated and also the practical results, challenges and future opportunities are described.

Amazing Wildlife Poo at the Taipei Zoo

Ju Lucia – Taipei Zoo

email: hgX04@zoo.gov.tw

Wildlife poo was once considered waste and distraction material at the zoological institutions. Other than adding to a landfill or throwing it out, however, this material can be actually useful and fascinating. At the Taipei Zoo, Wildlife poo has been innovated, redesigned and turned into educational tool. Through a series of wildlife poo educational interpretation which is introduced by the "Super Poo". Such as the "Poo Poo Art" stop welcomes the visitors to know the first thing about wildlife feces where they can also pretend to be a bug and crawl around inside the artificial structure of poo. The 2nd stop entitled "Group Your Feces" introduces the diversity of wildlife feeding hobby and the waste product. The 3rd stop is "Toilet Treasure" where talks about why the world hasn't been overtaken by all the wildlife poo. The 4th stop displays what is the "PoOwer". How can poo serves alternative sources of energy. The final stop is "Relate to Feces", in there visitors can learn more about wildlife poo the most interesting information, just like "who's got more poo?" or "who poop in piles?". Experiencing the poo adventure provides the visitors an opportunity to find the top issues of environmental conservation and poo fun in the Taipei Zoo's wildlife toilets.

Community Needs Assessment: An Attempt to Develop Sustainable Solutions to Environmental Problems Around Protected areas in Masindi and Bushenyi Districts, Uganda, East Africa

Tracy Osuo – The Jane Goodall Institute

email: tracy@jgiuganda.org

Natural resources in protected areas contribute substantially to rural livelihoods in Uganda although often, conflicts arise within communities regarding their use. It is therefore essential to determine such conflicts and/ or problems associated with protected areas, to facilitate the development of lasting solutions that will strengthen their community. This paper explores environmental problems of communities living around three different protected forest areas, two in Bushenyi and one in Masindi Districts in Western Uganda. The assessment was conducted by the Jane Goodall Institute (Uganda), in partnership with Disney's Animal Kingdom. Its goal was to determine environmental problems communities considered to be significant, their causes, effects and possible solutions to such problems. The results indicated that both communities considered human/wildlife conflict as the most significant problem which largely resulted in crop destruction. The Bushenyi communities felt that there was inadequate food in the forest for the animals causing them to come out of the forest to feed on their crops. The Masindi communities cited human settlement and cultivation close to the forest making it easy for the animals to access their crops. Interestingly, both communities considered the Government to be the cause of the problem and therefore responsible for solving it. These data show the importance of understanding perceptions of local communities and determining the underlying causes of problems. It was concluded that a good relationship between protected areas and local communities is important to ensure sustainability of natural resources. Helping communities improve their livelihoods and understanding their role in conservation may ultimately produce a more secure future for Uganda's biodiversity.

Changing Climate, Changing Zoos, Changing Education

Jessica Langley - Adelaide Zoo Education Service, Zoos South Australia

email: jlangley@zoossa.com.au

How do we provide effective environmental education in the face of serious global issues like extinction crises, habitat destruction and climate change? How have human values and lifestyles changed? Who are the students that we need to connect with the natural world and its inherent issues? Has recent research about conservation issues and effective pedagogy for environmental education affected what we offer as zoo educators? Are we, as environmental educators, more prepared than the rest of our society for the changes that our climate is bringing with it? This paper looks at some of the research findings surrounding these questions and how the changes have impacted on my role as the Zoomobile education officer for Zoos SA.

Educational Experiences that Link Natural Heritage and Local Tradition

Chloe, Tang Wing Yee - Kadoorie Farm and Botanic Garden, Hong Kong

The Piers Jacobs Wildlife Sanctuary (PJWS) is one of several displays at Kadoorie Farm and Botanic Garden (KFBG) that allow visitors to get close to native animals that have arrived via our Wild Animal Rescue Centre (WARC).

What makes PJWS different is a new strategy we are employing through interpretative signage and guided visits. This strategy basically introduces four elements to be included in our education messages;

1. Special facts and features related to the animal
2. The animal rescue story
3. Connections with local traditions and culture – poems, symbols or painting
4. Feelings in nature – real experiences

We hope these elements together will help visitors develop an awareness of wildlife conservation, and to acquire a set of values and feelings related to concern for the environment, and finally to become actively involved in conservation work.

Our next step will be to determine whether the new strategy can change the attitudes of our walk in and guided visitors. A questionnaire will be designed for this purpose.

The Educational Effectiveness of Living Museums

Stefano Angelini - Acquario di Genova

email: sangelini@acquariodigenova.it

The paper reports on the methodology implemented to evaluate the educational effectiveness of Genoa Aquarium; this activity is developed within the AquaRing Project, financed by the European Commission within the framework of E-Content*plus* Programme.

The general objective of the evaluation is to improve the performance of Genoa Aquarium in promoting the informal education and awareness of its visitors. To reach this goal, the staff is developing qualitative and quantitative research activities finalised to construct an index of educational effectiveness of the visit which varies between 0 to 100 and enable the management to identify the weaknesses in the exhibition areas.

The research, which refers also to similar studies in the field¹, requires the development of different specific activities: recognition of existing literature; examination of the key-concept (educational effectiveness) and identification of general and specific educational objectives; analysis of the exhibit areas and identification of key elements; observation of visitors' behaviour in various exhibition areas; "pre" and "post" visit survey on visitors; definition of educational effectiveness index; final test of the index by survey on visitors.

The end of research activities is foreseen for March 2009. This paper presents the overall methodology and the intermediate results of the implemented activities.

Assessing Young Children's Animal Knowledge and Conservation Behaviors After Visiting Kids' Discovery Clubs at Disney's Animal Kingdom

Kathy Lehnhardt, Dr. Jill Mellen - Disney's Animal Kingdom

email: kathy.lehnhardt@disney.com and jill.d.mellen@disney.com

At Disney's Animal Kingdom, inspiring guests to take conservation action is part of the mission. To that end, we developed a series of child-based activity stations in the park called the 'Kids' Discovery Clubs.' Our goal with these stations is to provide opportunities for our target audience (children 5-8 years of age) to learn about animals and what they can do to help wildlife.

The purpose of this study was to assess the efficacy of the Kid's Discovery Clubs in encouraging young children to learn about and to help wildlife. Specifically, we wanted to know if brief, engaging, experiences affect a child's animal knowledge or interest in adopting conservation behaviors. A primary challenge to systematically answering these questions was to develop methodologies that were not only reliable and valid, but also fun and engaging for our subjects.

Results showed that children demonstrated a higher knowledge of animal information than did similar children in control groups. We found that the Kids' Discovery Club experiences encouraged children's interest in adopting conservation behaviors and an 8% return of postcards showed that children actually completed their animal activities. And finally, we found that parents identified very few barriers in assisting children with conservation activities.

The Turning Point

Zhang En quan - Beijing Zoo

Beijing Zoo is on the Turning Point right now. We are trying to pay more attention to conservation education, and not only to be a scientific knowledge disseminator. We did a lot of hard work in the past years, but not successfully, but with the help of ACT, we learned some skills to run education program from last year. In 2007, we run 8 sessions of summer camp focused in conservation education, and that was the first time to run an overnight educational program with charge, about 400 children came to the camp and stayed over night in the Zoo. In 2008, for the special reason that safety of the Beijing Olympic game, we couldn't got the permission to run a camp, but the Biological classroom was ready by the 1st May, so we are holding a Frog class every day in our education centre.

The new methods of education make the staff more faithful, and also make our education centre more attractive, and also, we've got 4 new staff who just graduated from university this year working here with us, and after working here for 4 months, they all love becoming an educator in the Beijing Zoo.

Connecting Creatively - People Plants and Environment

Stephen Meredith - Botanic Gardens of Adelaide

email: meredith.steve@saugov.sa.gov.au

Just as zoos in recent times have concentrated on education and conservation roles, botanic gardens are also awakening to their relevance as key institutions for environmental, cultural and scientific education.

Like zoos, gardens have a relatively short time to get their stories across to the many school students who visit our sites annually. We deal with increasingly sophisticated young people who live in a fast paced world saturated with imagery and promotional sound bites that compete for their attention and interest. Harnessing and presenting our stories and messages in ways that make for engaging and intriguing learning across the school curriculum is a challenge for both zoo and garden educators. We need to creatively design and deliver learning programs that have educational integrity yet resonate with young people above the background chatter of their media-rich world.

The Botanic Gardens of Adelaide has tackled this challenge through a variety of approaches based around events, performances, the arts, learning packages and technology, all designed to capture the interest and attention of students beyond the more traditional guided tour or self-guiding notes. All have endpoints that creatively connect the environment to different types of learners whether they are visiting a botanic garden or zoo.

From Art to Zoo - Changing the Zoo through Art

Kasumi Nagakura – Yokohama Zoo

email: kasumi@tb3.so-net.ne.jp

Since 2005, we have been working with artists to produce new value of the zoo. Art enables us to deepen the ties of life on the planet between humans and animals by stimulating all of the different senses. Humans faced animals and work together to find comfortable music to make and hear various sounds in the art project "Music of Zoorasia". They worked to overcome any hesitation or unpleasantness animals felt because of the interaction with humans. There is an appropriate distance between humans and animals in the zoo; therefore, we can communicate by trial and error. Through observation to the relationship between humans and animals, we see individual animals existing in our world causes us to recognize animals as irreplaceable one like friends. This is very important as the zoo is a representation of the wild. Equally, communication between humans and animals was essential to these projects. We made an effort to work "with" animals rather than "for" animals as this is better for conservation. The new value was created through collaboration with artists and the opinion that a zoo is a place to consider how humans live as an equal member of the planet.

Promoting Biodiversity Conservation through Integrated Arts

Igsie Jimike, Research & Conservation Foundation of Papua New Guinea

The Research and Conservation Foundation (RCF) has enjoyed many successes over the years as it increased its Conservation Education activities. Our activities have evolved from weeklong teacher training workshops to semester long tertiary courses. This also meant that our approaches to reinforce biodiversity conservation efforts had to be improved to take into consideration the growing demand for conserving cultural identity along with biodiversity. As such, RCF has ventured into various approaches, one of which is conservation through integrated arts. This approach encourages the use of various arts and indigenous knowledge to promote biodiversity conservation in Papua New Guinea.

Changing Visitors' Attitudes

Muna Al Dhaheri – Al Ain Zoo

email: munad@alain-zoo.ae

Al Ain Zoo was established in 1968 without an education centre or education mission. In 2007 the new Al Ain Zoo Education Centre was established and education programs were started.

Before the establishment of the Education Centre, the zoo trip was mostly for entertainment, where all schools came to visit the zoo for 2 hours, watched the animals and used the play ground.

When a plan to change the zoo came to the surface, there was the will to change people's attitude toward the zoo.

Education became one of the main Al Ain zoo objectives. You can see that clearly by many aspects:

Building New dedicated Education Centre.

- In house zoo education based programs
- Topics include: - endangered species, desert adaptations, exhibit design, wildlife captive management, animal records, and the role of the modern zoo
- Dedicated Education Centre staff
- Improved zoo signage and graphics
- Fee for service

The presentation is coming in two parts:

First Part: Tell about the establishment of the centre, starting the new educational programs, and promoting of the centre.

Second Part: Tell about using the bird show in the education programs.

Animal Assisted Education Program for Disabled Children in Parco Natura Viva

Veronica Alessandra Zanardi, Katia Dell'Aira - Parco Natura Viva

email: natura.amica@parconaturaviva.it

A long term animal assisted education project for disabled children was carried out between October 2007 and May 2008. Three groups of children interacted with animals at Parco Natura Viva for one afternoon a week (on different days).

The project was an opportunity for children to practise responsibility through taking care of specially prepared animals which played as co-therapists (donkeys, rabbits, goats, sheep, Guinea pigs, turtles). Each day, the children choose an animal, according to their preferences. They cleaned, fixed enclosures, prepared food, gave food, and cuddled the animals. The sessions were structured to make the disabled children autonomous in certain jobs.

Furthermore, the aim of some of the sessions was to improve the knowledge of classes of animals, such as, birds, reptiles, and mammals, through observation, listening to the sounds, and handling samples.

A final session was dedicated to the creation of a project that the children can take home. These sessions were studied on the basis of the different deficits of each child, in order to help them to interiorize the concepts which they had experienced, and to share them with others (parents, brothers, therapists and teachers).

We Can All Discover the Natural World and Get Involved in its Protection: Special Educational Programs in Biopark Temaikèn.

Cecilia Perez Companc - Fundación Temaikèn
email: cepc@temaikèn.org.au

At Temaikèn Biopark, people with special needs can experience nature through our Special Educational Programs.

- Discovering Animals
- Exploring Nature
- Feeling Nature

Kids, teenagers and adults with visual, auditory or mental disabilities find modern communication tools and educational materials through which they share new sensations, learn about our flora and fauna in its natural environment and discover the world around them.

Unique Customized Walks: These programs are unique and were tailor-made for people with special needs. Their educational; however, they are also recreational and fun.

The different areas in the Biopark that are visited had been carefully selected to motivate the participants who will be exposed to different visual, auditory, tactile and olfactory stimuli along the visit.

More than 6000 participants with different levels of disability have visited the Biopark since these programs were launched. They all participated and enjoyed them greatly. To go out and meet with the world of nature allows people to experience new sensations and emotions making each and every one of them a part in the conservation of the environment. We must all participate in this mission.

Taking Action for Conservation

Brooke Hutchison – Taronga Conservation Society Australia
email: bhutchison@zoo.nsw.gov.au

Over the past 3 years, Taronga Conservation Society Australia Visitor Education and Interpretation has been working towards refining an approach to changing behaviours of our visitors – offering instruction to our visitors on how they can positively contribute to conservation in their every day lives.

We challenge our audience to think about the conservation role of zoos, and where they and their families fit into the continuum of conservation. Visitor Education and Interpretation sets out to deliver key messages to facilitate understanding about the zoo's role, and action messages to motivate personal action.

Working with the knowledge that our main audience visits in their leisure time and often as a family group, we have infiltrated these messages across all learning devices and experiences across the zoo. This broad range of self directed learning opportunities prompts action, facilitates skill development and motivates behaviour change.

This paper will outline the process, discuss some of the challenges, highlight the positive outcomes and describe future goals including evaluation.

Education for Sustainability – An essential challenge for the 21st Century Zoo

Rachel Lowry - Zoos Victoria
email: rlowry@zoo.org.au

The processes threatening biodiversity across the globe are numerous and varied, yet the majority have one thing in common - humans. Therefore, if 21st century zoo's are to address the core of these problems, we must invest our energy and resources into influencing the 600 million people across the globe that choose to visit our zoos each year. In order to do this effectively, zoos need to be strategic about the education models that they utilise, the audiences they target and most importantly the behaviours they select to influence. This paper highlights an approach to Education for Sustainability

(the Connect-Understand-Act model) that has been successfully trialled and evaluated across Zoos Victoria since 2005. The success of this model lays down the challenge to zoos to extend these practices beyond school education programs and into the broader visitor experience.

“Hide and Seek, Find the Cats in the Zoo”

Wu, Chien-chu - Taipei Zoo
email: tgx11@zoo.gov.tw

At summer time of 2007, a new cable car system named Taipei Maokong Gondola started operating on Taipei Zoo's borders. In the cabin, you could take in the whole view of Taipei Zoo. The Maokong Gondola is one of Taipei City's new tourism policies. Taipei City government wants to combine Taipei Zoo's attraction with sightseeing industries of city southern area and make it more prosperous. Therefore, Taipei Zoo was given an assignment to meet the goal under the Zoo's ability. To combine education with entertainment into recreation isn't easy work in a short period. Finally, we created a game called “Hide and Seek, Find the Cats in the Zoo” through team's brainstorming to connect with Maokong Gondola. Because the “Maokong” in Chinese means “No cats”, so we got an idea from cats' mystery and designed a treasure hunt map. Visitors came to Taipei Zoo could draw on their own map for each animal they met and try to find out all places that the cats, or felines, “hiding”, and collected certain words “hiding” on exhibit labels. Our purpose is to let the visitors know more about the diversity of felines through the seeking process.

Advocating and Influencing Action

Ian Walton - Monarto Zoo
email: iwalton@zoossa.com.au

Since 2002, in partnership with the SA Murray Darling Basin Natural Resources Management Board's (SAMDBNRM) Lower Murray Catchment Care Officer, Monarto education co-manages a number of forums that provide a model for Student voice and curriculum change in schools. This advocacy is making a difference and is being seen and used as a model for others. The programs are developing networks of students and teachers, providing support for action, linking other service providers and actively promoting student voice. Using the lower Murray Youth Council, Junior Youth Environment workshops and the Lower Murray Teachers for Sustainable Education network as exemplars, the paper explores how the partnership between Monarto Zoo (ZoosSA) and the SAMDBNRM is collaboratively influencing and advocating conservation education practices across the region and beyond.

Creating Partnerships For Conservation

Lian Wilson and Shelley Waldon - Melbourne Zoo
email: lwilson@zoo.org.au and swaldon@zoo.org.au

Engaging students in meaningful learning experiences, as well as allowing them to take ownership of their learning, is a challenge all educators are faced with. An equal challenge from a zoo perspective is to develop programs, which extend beyond the context of the zoo visit and classroom learning, creating real life learning experiences as key drivers for student and community engagement. Over the past years, Zoos Victoria has trialed a partnership model that successfully addresses the challenges raised, yielding many positive benefits for program participants and the zoo's involved.

Two programs are showcased in this paper – Orang-utan Browse Plantation Project and Tangkahan Conservation Education Program - that demonstrate the success of creating partnerships for conservation.

These partnerships can offer rich, authentic experiences that have a genuine impact on deeper learning and changes in beliefs and attitudes, which can be a lever for effective community action beyond the classroom. The partnerships are based on real needs in the zoo and integrate curriculum units of work, which build knowledge and understanding about biodiversity issues. They facilitate opportunities that empower students and their communities to take action and make a difference in their world both locally and globally.

A Conceptual Framework for Integration of Learning Opportunities at the National Zoological Gardens of South Africa

Clifford Nxomani - National Zoological Gardens of South Africa

The National Zoological Gardens of South Africa (NZG) has historically implemented a wide range of experiential training initiatives, educational programmes and learning opportunities. However, the ability to measure the impact of these various activities internally and externally was not prioritized or integrated within the design of such initiatives. In addition, many of the activities were externally directed and focused, despite the fact that such interventions/ activities would be highly beneficial to the zoo's own staff. The NZG Academy is a conceptual framework that is designed to achieve integration of externally directed learning opportunities with internal requirements of staff education, training and development. It provides for programatization, and hence clustering, that will enable the achievement of both internal and external education goals plus the ability to measure, monitor and review the impact of activities. Key to the successful implementation of the concept is its alignment both to the corporate strategy for science advancement as well as the national imperatives for science education.

The Potential for Zoos to Influence Visitor Behaviour

Ian Smith – Monash University, Melbourne
email: liam.smith@buseco.monash.edu.au

Two years ago, I presented a paper at the annual ARAZPA conference questioning whether the lip service paid to zoos' ability to influence behaviour is being achieved, or is possible. The little research conducted on this at the time suggested that zoos are not achieving their goals. In the paper, I also suggested that there were well-established methods available, which could be applied to the zoo context. Since presenting this paper, researchers at the Tourism Research Unit have undertaken a number of studies that have examined closely the measures used to examine the influence of one of several zoo experiences on behaviour to arrive at better methods for measuring the impact. This paper will re-examine the ways in which zoos evaluate their efforts to influence behaviour and present alternatives to these methods. In doing so, it will also explore ways to design communication strategies with a greater likelihood for influencing visitor behaviour.

The Role of Conservation Education in the Rhino Re-Introduction Program in Uganda

David Musingo - Uganda Wildlife Education Centre (UWEC)
email: dmusingo@uweczoo.org

The rhinoceros once roamed freely throughout the wide-open ranges of Africa in high populations. In Uganda, rhinos lived until the early 1980s when they became extinct because of poaching as the demand grew for their horns – an ingredient in traditional medicines, raw material for making sword handles and a valued accessory in the Middle East.

This paper presents an intervention scenario to re-introduce rhinos in Uganda. The reintroduction program was designed into three phases. The first phase saw two rhinos being brought to the Uganda Wildlife Education Centre (UWEC) which was purely for conservation education (CE) and breeding purposes. In the second phase, seven rhinos were introduced at the rhino sanctuary for the same reasons. The final phase is the eventual release back into their natural habitat.

UWEC in collaboration with other stakeholders is implementing the last phase. The CE program begun in two districts where rhinos existed, with the aim of engaging the school children, teachers and the communities in exploring and understanding rhino conservation issues and impart the best intervention practices that foster sustainability.

Methods like radio talk shows, workshops, lobbying, advocacy among others were used to mobilize the participants for the program. Rhino CE children's camps are organized for pupils and teachers at UWEC to foster understanding of the values of rhinos.

Inside and Out – Perspectives of Zoos from Both Sides of the Fence

Andrew Tribe - University of Queensland
email: a.tribe@uq.edu.au

Despite their best efforts, the effectiveness of zoos as conservation centres continues to be questioned and in particular it is not clear how they are perceived by the conservation community

outside the zoo. This paper compares the perception of zoos by their own staff and by 'non-zoo' wildlife conservationists. It is apparent that there are substantial differences: zoos believe that they can and do contribute across a range of areas, both *in situ* and *ex situ*, yet most outsiders see their role primarily as educators who may also do some captive breeding. This dilemma has important implications for zoos in their search for sustainability: can they really contribute effectively to wildlife conservation beyond the front gate?

Survey of Visitor Opinions in Odense Zoo

Nina Collatz Christensen – Odense Zoo

In the summer of 2007, Odense Zoo carried out a survey of visitors' opinions of some of the disputable ethical issues involved in managing zoological gardens. Visitors were issued a "voting paper" along with a number of red and blue pieces, respectively printed with "yes" and "no". Five stands were set up at various points around the zoo with photos of an issue, a description of the background and two possible replies. The visitors could deposit a red piece in a tube if they agreed with the statement expressed and a blue one if they disagreed. The votes were counted each week. The latest voting results were posted by the exit so visitors could see the overall results on their way out. The survey was conducted from June to October 2007.

The survey comprised the following questions: "Should lion cubs in excess of that needed by the Zoo be killed?"; "Should Knut (a polar bear in Berlin Zoo) be killed if he doesn't get along with the other bears?"; "Should the Zoo feed whole cadavers to predator species?"; "Should the Zoo just earn money or also inform visitors about nature?"; and "Should the Zoo have white tigers?". Some of the results were expected, while others were surprising.

It is important to emphasise that Odense Zoo did not let the visitors *decide* an issue on the basis of the survey results, but that we used the survey as a way of getting our visitors to express their opinions about what we are doing in Odense Zoo.

Ocean Park Expedition Programme

Carol Liu - Ocean Park Corporation, Hong Kong
email:carol.liu@oceanpark.com.hk

Although about 40% of Hong Kong's lands are country parks, most teenagers are isolated by the concrete jungle and spend little time to visit countryside. To reconnect teenagers with nature, we tailor-made a 3-day education programme called "Ocean Park Expedition" for students aged 12 to 14 years old. Through the programme, students would appreciate the amazing adaptation of wildlife and willing to take conservation action. At the end of the programme, students would work in group to produce a 3-minute TV commercial to promote conservation. Their masterpieces were broadcasted at the theatre of Ocean Park and at their school to spread the messages to school students and teachers. This certainly empower the participating teens and given them a sense of achievement after completing the big project. We received positive feedbacks from teachers and students after the programme.

Creative programme design was essential to attract the teens' participation and enhance interaction. We will share ideas of games and activities which are exciting and able to draw students' attention to the wildlife. We hope this presentation can let zoo educators get inspired to create more innovative programme.

Introduction of Conservation Education in Chengdu Zoo

Xiao Yi Yang - Chengdu Zoo

In 2006, Chengdu Zoo collaborated with the Chengdu Technology College to set up volunteer working station in our zoo. There are 114 volunteers now actively worked in our zoo at the weekend. So I will introduce how we conducted the volunteer training, and the activities promoted by volunteers. In August 2007, over 100 visitors joined Chengdu Zoo Summer Conservation Station Series Program. Through research, we know some ways of developing educational programme in our zoo. Recently, 2008 YOF series activities for CAZG are on underway.

Evaluating the Impacts of an Education Internship at Disney's Animal Kingdom

Stephanie Arnett - Disney's Animal Kingdom

email: stephanie.r.arnett@disney.com

The Conservation Education field often depends upon the support of entry-level staff to deliver our important messages. At Disney's Animal Kingdom, the Education Presenter Internship is a six month professional experience. The intern's primary responsibility is to engage visitors in fun, interactive conversations focusing on conservation action in an informal education setting. Over the course of the internship, an intern may speak to 50,000 visitors providing an overwhelming opportunity to connect large numbers of visitors to wildlife conservation messages.

At Disney's Animal Kingdom, we wanted to understand the impact of this internship experience on the individual's knowledge, attitude, and behaviors about conservation and professional skill development. This study looked specifically at behaviors associated with wildlife conservation actions, development of professional/leadership skills, and career/life choices.

The study results showed that the majority of interns valued their internship. As a result of their internship experience, participants stated that they are more willing to engage in conservation behaviors. Over 90% stated that the internship positively impacted their self-confidence, ability to teach others, and increased their communication and leadership skills.

Training Program for Environmental Leaders

Wilialberth Jiménez - University Forest-rangers Group, Venezuela

email: angelmaligno_4@hotmail.com

University Forest-rangers group is an ecological ONG (Organization non-government) founded in 1996, with the institutional support of the Zoo and Botanical Bararida Park and the University Western Center Lisandro Alvarado of the city of Barquisimeto. Our mission is the formation of environmental leaders which fight for the respect to life for environment conservation. It supports and collaborates in programs and activities of the Zoo's environmental education unit. Most of their activities were conducted together with different organizations and ministries from the region. This voluntary service is independent and from the year 1998 executes a training program for environmental leaders, authenticated by the Zoo. It is constituted by three levels of qualification, each one with a specific theoretical-practical item which is evaluated by a trainer after the stipulated period to approval each level. When the program is concluding, the participant receives a diploma of accreditation from the University Forest-rangers group. At the moment there are 70 active members, and 420 volunteers with ages between 12 and 70 years, using the zoo as educative resource and all its elements.

Enrichment Application in African Zoos

Jonathan O.F. Fayomi, University of Ibadan, Nigeria,

Enrichment by my definition is an additional input into life-style of zoo animals and their environment.

It is a life activity, which its limitation could not be met.

Enrichment applications in zoos like the transformation of Menageries to Conservation Centers occur in stages. The more civilized we are the more enrichment applications in zoos improves.

The enrichment could be studied in three patterns, these are:

- a) Enrichment into animal enclosure; this could be traced from the designing of Hamburg Z Zoo in 1970 by Carl Hagenbeck and his architect, Engenschwiler
- b) Enrichment into the animal feeding, which is the supplement added to the diet offered to the captive inmates and
- c) Enrichment into educational dissemination in the zoo (events)

Most of the Criteria for a zoo to be member of PAZAAB is based on the level of enrichment application in that zoo.

Details on each of the patterns were included in the final right up of this presentation. Also vulnerability of enrichment application, which includes; Psychological effect on the animals, keeper/ animal relationship, physical/health appearance of the animal and entertainment of zoo clients were discussed extensively in the final right up of this paper.

Parco Natura Viva: In Action for Madagascar

Katia Dell'Aira - Parco Natura Viva

email: didattica@parconaturaviva.it

Parco Natura Viva has a great interest in Madagascar:

- Part of our staff has conducted scientific research trips,
- Our park hosts the most important collection of Lemurs in Italy, and maintains the Stud-Book for Ring-tailed Lemurs (*Lemur catta*),
- Numerous *in-situ* and *ex-situ* research projects have been conducted in collaboration with Italian universities,
- We signed a scientific convention among: our Park, the University of Torino, and the Zoological Park of Tzimbazaza for the development of research projects and the conservation of this marvellous island.

Furthermore, we are very proud to have been assigned the role of National Coordinator of the European Association of Zoos and Aquaria (EAZA) Campaign 2006-07 in favor of Madagascar, which we will hold until 2009.

Numerous activities have been organized by educators, both within and outside the Park, such as, photographic displays, theme oriented laboratories, a school competition on Madagascar, selling Malagasy handicrafts for fund-raising.

A co-marketing project was done for the production of exercise books about Madagascar for large scale distribution, and we created an environmental tale about Lemurs, in which, the drawings were realized by Malagasy school children. This last project was awarded a prize by EAZA as the most original one.

EAZA Training Moscow 2008

Elena Migunova - Moscow Zoo

email: amigpoly@rambler.ru

In June 2008 Moscow Zoo was host to the 2nd European Association of Zoos and Aquaria Educators Training Seminar. This week long workshop was attended by around 30 people from across Russia, Ukraine, Latvia, Bulgaria, Hungary, Kazakhstan, and Uzbekistan. Presentations and workshops were provided by Stephen Woollard (Scotland), Harry Schram (Belgium), Gaby Schwammer (Austria), Jeannette van Benthem (Netherlands) and Moscow Zoo.

Participants enhanced their skills in communication/presentation, interpretation, conservation campaigning and evaluation through a series of presentations and workshops, translated into Russian throughout.

The seminar was very successful in building on the existing strengths of the zoo education community in Russia and eastern Europe and the content and format provides a system that could be replicated in other regions to support zoo educator training and development.

Zoo: Beyond the Boundary

Sarita Jnawali - National Trust for Nature for Conservation

email: sarita@centralzoo.com.np

The Central Zoo the Zoo of Nepal is being managed by the National Trust for Nature Conservation (NTNC). The Central Zoo is one of the major projects of NTNC. The Central Zoo is visited by more than 1,000,000 people annually. Besides animal management, the zoo is promoting environmental communication and education among the visitors. The **Friends of the Zoo (FOZ)**, a membership based Conservation Education Programme of the Central Zoo, is one of the effective approaches to promote conservation education among school students. The Central Zoo organizes various annual conservation educational activities to the FOZ members with aim to raise awareness on nature, wildlife conservation and other environmental issues. The present urban environmental problems have become one of the most inevitable problems which can be solved only by the active involvement and dedication by the urban public themselves. Environmental communication and education is the only effective short - term and long - term instrument for bringing about the desired changes in the world. The solution to environmental problems lies in imparting environmental communication and education to all sectors of population.

The Central Zoo is trying to develop skills and attitudes towards urban environmental issues through the Friends of Zoo programme in the Central Zoo. Over the time, the programme also incorporated

some of the urban environmental issues. The programme has directly contributed to the FOZ member schools that are running the Environmental Education curriculum in a classroom based approach. The outreach program to the different schools so far has left its impact on the urban school children. The success of the Friends of the Zoo programme has been indicated by annual increase in the number of FOZ members. At present, the zoo has been able to enlist more than 20,000 FOZ members and has an effective network with more than 200 different schools of the Kathmandu, Lalitpur, Bhaktapur and Banepa and the active members stand yearly over 5000.

Hence forth the education program has now not been limited to the Zoo itself but has gone beyond its boundary to involve and aware students about the wildlife as well as environment education.

Educational Actions that Stimulate the Environmental Culture:

The Zoo Goes to the Community

Martha C. Sulbarán H. - Zoological Park and Botanical Bararida, Venezuela

email: lahabch@yahoo.com

The Unit of Environmental Education of the Bararida Park executes the program “the park as a sustainable educative resource”, contributing with ecological and partner-environmental formation of individuals of different social groups to a “conservacionista” culture. It develops “the zoo goes to the community” extension activity whose objective is to support formal environmental education by means of the educative resources in the zoo. The target is: educational qualification and attention by students, communities, grandparents, and handicapped people, achieved by hiring young people with cognitive deficit as part of the zoo staff. This activity consists of oral exhibitions of different topics: biodiversity, alternatives to diminish the anthropogenic impact in the environment, extinction of species and strategies of environmental education, supported with didactic tools which activate the senses and the sensorial learning in the participants; finalizing each visit with the application of an evaluation instrument. In the period of 2002 – 2007, 670 visits were made to rural and urban schools, equivalent to 61050 people. Our target is to fortify the mission of the zoo in the community through the formation of environmentally educated citizens.

Budongo Trail – Integrating Conservation, Education and Research

Stephen P Woollard - The Royal Zoological Society of Scotland

email: swoollard@rzss.org.uk

Budongo Trail the new £5.6m chimpanzee exhibit at Edinburgh Zoo has been designed and planned to integrate the Zoo’s work with chimpanzees (*Pan troglodytes*) both in the Zoo and in the Budongo Forest, Uganda. The interpretation for the exhibit utilises new and innovative design techniques, including multi-media, a dedicated magazine, sensory exhibits, a lecture theatre, and a unique free-choice environment for the chimpanzees which includes three indoor areas with different conditions and a huge complex outdoor environment.

The focus of the exhibit is upon chimpanzees and the Budongo Forest, Uganda, where the Royal Zoological Society of Scotland (RZSS) funds research, conservation and education on chimpanzees, other native species and the habitat. Within the Budongo Trail at the Zoo there are elements that reflect the work in Uganda, activities on chimpanzee biology and behaviour, and opportunities for the public to offer their direct support to conservation.

The Budongo Trail provides a unique environment for advancement of chimpanzee research in association with the Scottish Primate Research Group, who with RZSS are also conducting research on chimpanzees in the Budongo Forest. Budongo Trail is an integrated conservation, education and research facility that also significantly advances chimpanzee husbandry and zoo interpretation.

Climatic Changes? Let’s Change our Attitudes!

Maria Cornelia Mergulhao – Sorocaba Zoo

email:dinamica@splicenet.com.br

The current environment’s situation makes us think that the role of zoos in environmental education goes beyond the discussion about animal conservation. Our activities should include modern issues such as global warming, its causes and consequences for all living species, including man. After the report from IPCC was published, a big discussion about the global and local causes of this phenomenon was initiated. The city of Sorocaba, Brazil, published data that showed that the

temperature had risen 2°C over the last 12 years. With that, the Sorocaba Zoo elaborated strategies that could touch the public about this important issue. The theme was introduced in all the schools' monitored visits, the celebration of Environment Week, Earth Day and Tree Day, besides courses for different ages. The main causes, both individual and collective, were discussed and also what attitudes should take place to stabilize the world's temperature raise. Such actions like, decrease of general consumption, tree plantation, wildfire combat and save water and energy were developed and encouraged. The strategies included group games, exhibits, camps at the Zoo, visits to Atlantic Rain Forest areas and plays. As a result we had a great participation from children and their families. Besides, the Sorocaba Zoo became partner of the City Hall in many campaigns like: Cidade Super Limpa (super clean city), Combate às Queimadas (wildfire combat), Combate a Dengue (dengue combat) and Campanha de arborização (Arborization campaigns) in which native species' seedlings were planted throughout the city during the year

Meteorological Scholastic Network from the Zoological One Program Meteorology in the Classroom

Gilbert Sanchez - Zoological Park and Botanical Bararida

email:gilbertsanchezt@yahoo.com

The Zoological Park and Botanical Bararida located in Barquisimeto, state Lara Venezuela develops to the education activity nonformal "Meteorology In the Classroom" that includes/understands for its execution of several stages properly evaluated that they go from the instruction to professors, teachers and representatives of basic concepts on weather, the manufacture of instruments for measurement and registry with materials of reuse for the understanding of his principles of operation, the data collection and later analysis and finally the conformation of a meteorological scholastic network that allows to the interchange of data and experiences between the different institutions from the region. Its fundamental objective is the one to wake up the interest and problematic sensitivity before the global one of the climatic change in the population and that hits of direct way in the diminution of the biological diversity all this sustained in the fundamental pillars of the zoological ones as they are it the recreation, investigation, conservation and education. This program has instructed to more than 40 facilitators of 35 educative institutions offering the understanding of the variables that affect the climate and the change of these by effect of the man of a simple way to the scholastic sector and community.

Junior Zoo Directors

Mirko Marseille - Dutch Zoo Association

email:mmarseille@nvddierentuinen.nl

Besides having adult management personnel, the 15 Dutch zoos affiliated with the Dutch Zoo Association (NVD) all annually appoint a junior director, aiming to get children involved with nature and conservation. Another objective of the Junior Zoo director concept, which was initiated in 2006, is to promote several zoo's activities.

The elections for becoming a Junior Zoo director are open for children aged between 6 and 12 years and are organized through the internet (www.kinderdierekteuren.nl), children are tested on their knowledge about nature, biology and zoo management and ultimately one suitable Junior Zoo director is selected for each zoo. In 2006 and 2007, a total, of approximately 40.000 children took part in the competition of whom 15.000 went through to the last round, in which the 15 junior Zoo directors were selected. The Junior Zoo director's term of office runs from August to June. Each year in October all Junior Zoo directors will join a Junior Zoo director meeting during which important zoo-related issues are discussed.

A Junior Zoo Director can visit other zoos, organize a birthday party at the zoo, submit articles/opinions for their zoo's magazine, or attend other special events in their zoo such as opening ceremonies, taking part in juries and even welcoming the Dutch Queen. Each Junior Zoo director will be assigned a conservation project that is funded by the Dutch Zoo Conservation Fund (DZCF), in this way the Junior Zoo director acts as an ambassador for a specific nature conservation project. During the year a Junior Zoo Director endeavors to attract as many supporters (fans) as possible for his or her DZCF project. Some Junior Zoo directors mobilize fans at their local football club or their school, whilst others make use of campaign posters. Enthusiastic fans can vote for their favorite nature conservation project on the website. The project with most fans is awarded a 2500 euro donation from the Dutch Zoo Conservation Fund. For the year 2007-2008 the hornbill conservation project on the

Philippines attracted most supporters; the Junior Zoo director of bird park Avifauna assembled 18.464 voters.

The promotional activities around the Junior Zoo director concept are ideally suited for PR campaigns. These campaigns can be organized at a national level but can also readily be tailored to each zoo regional media. The project is of great interest to children and their families and additionally is highly appealing to the media. The children are offered a role of their dreams which can readily be communicated in words, by photos and in particular by videos.

The Junior Zoo director project has now been launched two times since 2006. So far, the issues associated with the role of the Junior Zoo director received comprehensive attention in both the zoo's communications and the Dutch media. The Junior Zoo Directors are assigned a website (weblog) which they use to elaborate on their experiences at their zoo. The project's combination of education and communications has proven a great success.

“Escaping the Zoo”

Anthony Stimson - Australian Wildlife Displays

email: ant8er@bigpond.net.au

When you feel you are trapped by an institution, it could be time to escape! To be effective centres of conservation education, it helps to be changing and fresh, but for zoos and aquariums this is can be difficult. Over the last 4 years a freelance nature conservation educator with an infectious passion for biodiversity has been “let loose”, to try a new concept in zoological exhibition or rather “exposition”. What better to reach people in this age of instant gratification than an “Annual Expo”. Staged on a scale never before seen in Australia with unprecedented visitation, what a great affordable way to be dynamic and innovative to deliver our message of the urgency of nature conservation action.