

Zoo Education

and its Suitability for Translocation

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Modern zoos increasingly provide *in-situ* support. This can mean financial contributions that are reflected in zoo signage, thus raising public awareness. Zoos can also provide technical support: for example veterinary skills and research techniques. Teaching and learning skills can also be a component of technical support. This paper provides background on education skills that are considered appropriate for translocation, using an environmental education project in Mauritius as a case study.

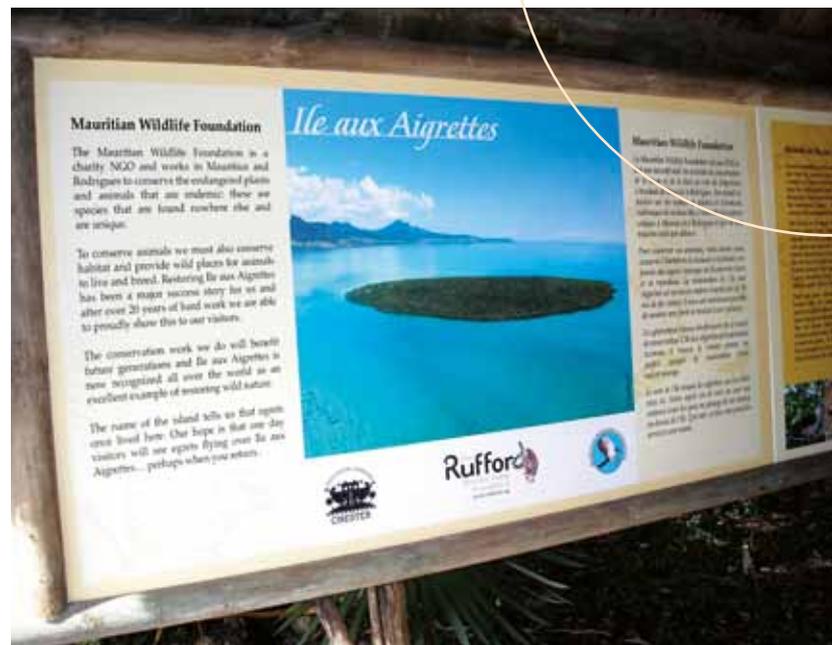
Materials and Methods

Over the decades, the approach to in situ conservation has tended to shift between fortress-type conservation, including the displacement of people, and the inclusive approach of stakeholder partnership (Spinage 1998). This, more recent paradigm shift, acknowledges the need to address such conservation issues as human wildlife conflict, resource management and sustainable livelihoods. This emphasis on interface with community suggests that 21st century conservation is becoming a social science (Milner-Gulland 2002). Some skills are more easily translocated across countries and cultures than others; candling an egg or darting for anaesthesia for example. Education is more complex. It is set within the framework of social science, is culture-sensitive and in some countries may also be socio-politically sensitive. Zoo educators should proceed with caution when transferring their skills lest they are perceived to be imposing inappropriate methods and content. Working sensitively and in partnership with in-country colleagues is an essential component of successful *in-situ* conservation education. An example of a partnership of this kind is 'Learning with Nature', a conservation education initiative between Chester Zoo in the UK and the Mauritian Wildlife Foundation (MWF), the leading conservation NGO in Mauritius.

The Process and the Planning

Being given a coral island to develop for education is probably every educator's dream. Ile aux Aigrettes is such an island; a 29ha Nature Reserve 800m off the

Ile aux Aigrettes Nature Reserve.



coast of Mauritius, lying in the shelter of Mahebourg Bay and crucially inside the protection of a coral reef. The island has benefited from over 20 years of intensive habitat restoration and the reintroduction of an assemblage of endemic plants and animals. The only human inhabitants on the island are the warden and the field researchers who manage the conservation. The boat trip may be short in terms of travel time, but the journey winds back the calendar 400 years. This vision of a once-pristine Mauritius is what MWF hoped to convey to local school groups visiting the island. The 'Learning with Nature' project and the resources and training required for delivery were developed in

partnership with Chester Zoo over a three-year period. This culminated in an official launch in May 2009. The consultation process that led up to the launch is outlined below (Table 1).

The Shifting Balance of Partnership

The Mauritian school system is examination-driven with children required to pass the Certificate of Primary Education, CPE, (end of Year 6) to gain entry into secondary education. Competition to gain entry into the best secondary schools is fierce. The pressure on both primary and secondary teachers to deliver the curriculum is intense. Any thoughts of learning outside the classroom are tempered with the very real need to deliver didactic classroom learning. As such, little emphasis is placed on experiential learning and the benefits accrued from field trips. This is not to say that conservation and environmental education are excluded from the curriculum. They are there, but not in any practical sense and this is what MWF hoped to address by promoting field trips to Ile aux Aigrettes. Identifying

the institutional aims and objectives of MWF and marrying those to the demands of the school syllabus was the first step in project design. Without clear links to the curriculum and exam content, it was thought highly unlikely that the project would attract teacher, school or parent support. At the onset it was recognised that this skill had to be recruited locally from an education professional who understood the nuances and subtleties of the Mauritian education system. However skilled and experienced a zoo educator is within their own education system, this is no substitute for local insight and empathy. Mr Faizal Jeeroburkhan was appointed as educational consultant for the pilot and launch. Defining aims and objectives and building this into a realistic lesson plan was the next phase and this was done in partnership between Faizal, Maggie and Vikash (MWF Conservation Manager).

Zoo educators with experience in informal learning settings and in planning for participatory learning may have an advantage over those whose experience

Table 1 The Consultation Process.

Date	Event	Output
2006	Preliminary discussions	The project scoped
May 2007	Stakeholder Consultation (MWF Staff and Trustees/Government Ministries/ Head Teachers/ Management at other field trip sites and Chester Zoo Education Programmes Manager, Maggie Esson)	Report produced by Maggie Esson highlighting action points
March 2008	Three-day workshop (MWF Staff and Trustees) co-facilitated by Maggie and Prof Carl Jones, MWF Scientific Director	Consensus on action points agreed by MWF Management and Trustees and time-bound action plan devised
August 2008	5-day Ranger training course run	Course delivered by Presenter Team Leader Chester Zoo, Sarah Bazley Rangers acquire new skills
January 2009	Locally-based education consultant, Faizal Jeeroburkhan recruited on six-month contract	School consultation commenced and curriculum content agreed with Faizal Lesson plan produced
January – April 2009	Island work plan put into action Launch and evaluation	Resources designed and put in place for the launch. Chester Zoo joiner, Mark Roberts working with MWF Projects Co-ordinator, Frederique Koenig
May 2009		Launch completed. Monitoring and evaluation carried out by Maggie and Faizal. Data analysed by Andrew Moss, Education Research Officer, Chester Zoo

Maggie Esson (Chester Zoo) and Vikash Tatayah (MWF).



Resourcing the island included designing and planning an exhibition, signage at various key points on Le Sentier and the creation of super-immersive stopping points on the trail. Design principles; readability, word count, font size, balance of words and images, naturalistic/rustic use of mounting materials are all well understood by zoos. This is another example of zoo-based skills that can be successfully brought to an *in-situ* project. In the case of this project the Chester Zoo joiner Mark Roberts, was responsible, on-site, for much of the carpentry associated with the aesthetic framing of the interpretation.

Immersive ebony forest experience.



is essentially limited to the pedagogic genre of the classroom. The methods for delivering the lesson plan were therefore devised from zoo-based experience and this led on to resourcing the learning. Resources must take account of the environment in which they are used; climate, temperature, humidity, security, familiarity of users to materials and processes, life span and ease of replacement. This is where working in partnership has advantages. The successful delivery of a lesson plan is also dependant on the skills and confidence of the front-line educators. Many zoos run public education talks and their staff have acquired a range of presentation skills. This is a skill that lends itself to being transferred to nature reserves and trails and this is what Chester Zoo did. A training course was delivered to the Ranger team who were charged with leading the school groups on 'Le Sentier du Dodo', an upgraded nature trail around the island.

Results

The launch took the form of a pilot comprising 13 tours that ran over five days with four schools participating. A total of 12 teachers and 119 students aged approximately 14 years old took part. On one of the days, a

Sarah Bazley (Chester Zoo) and the Rangers on the Training Course.





group of VIPs including government officials was invited for an official opening. This highpoint drew the attention of the media and excellent local media coverage resulted for both MWF and Chester Zoo. The 'Learning with Nature' launch was funded through a grant from the Rufford Foundation secured through Chester Zoo.

Increasingly zoos are asked to evidence the success of their education role and monitoring and evaluation techniques are being developed in zoo education departments (WAZA 2005). This growing expertise can also be applied to field projects. Following their trip to the island, teachers agreed to visits to their schools for monitoring and evaluation purposes. Faizal and Maggie ran the evaluation together though ease of passage was undoubtedly navigated by Faizal. Semi-structured interviews were conducted with nine of the 12 teachers who had taken part in the launch.

49 Students in two schools completed Personal Meaning Maps (PMMs) and 67 students in the other two schools wrote historical accounts. The Rangers took part in a formal staff debrief session.

Teachers

From the teachers' interviews information was gathered on:

- How closely the content related to in-school teaching
- The length and duration of Le Sentier, (which was 1.7 km and 2 hrs)
- The knowledge and professionalism of the Rangers
- What the trip should cost (the pilot was free)
- Whether teachers would recommend the trip to colleagues

Students

Analysis of PMMs and written work was based on methods developed by Falk & Dierking (2000). PMMs are considered to be an inclusive approach to collecting data from students of different ages and abilities 'avoiding linguistic barriers' (Barraza 1999: 49) and for different learning styles and abilities to be accommodated. (Gardner 1995) Students were given the choice to write their historical accounts in English, French or Creole and to caption their PMMs in a similar way. The prompt for both activities was directly related to the aim of the trip, to gain an understanding of what pristine Mauritius was once like: 'Imagine you are a sailor landing on Ile aux Aigrettes 400 years ago. What was it like? Draw or write on the paper.'

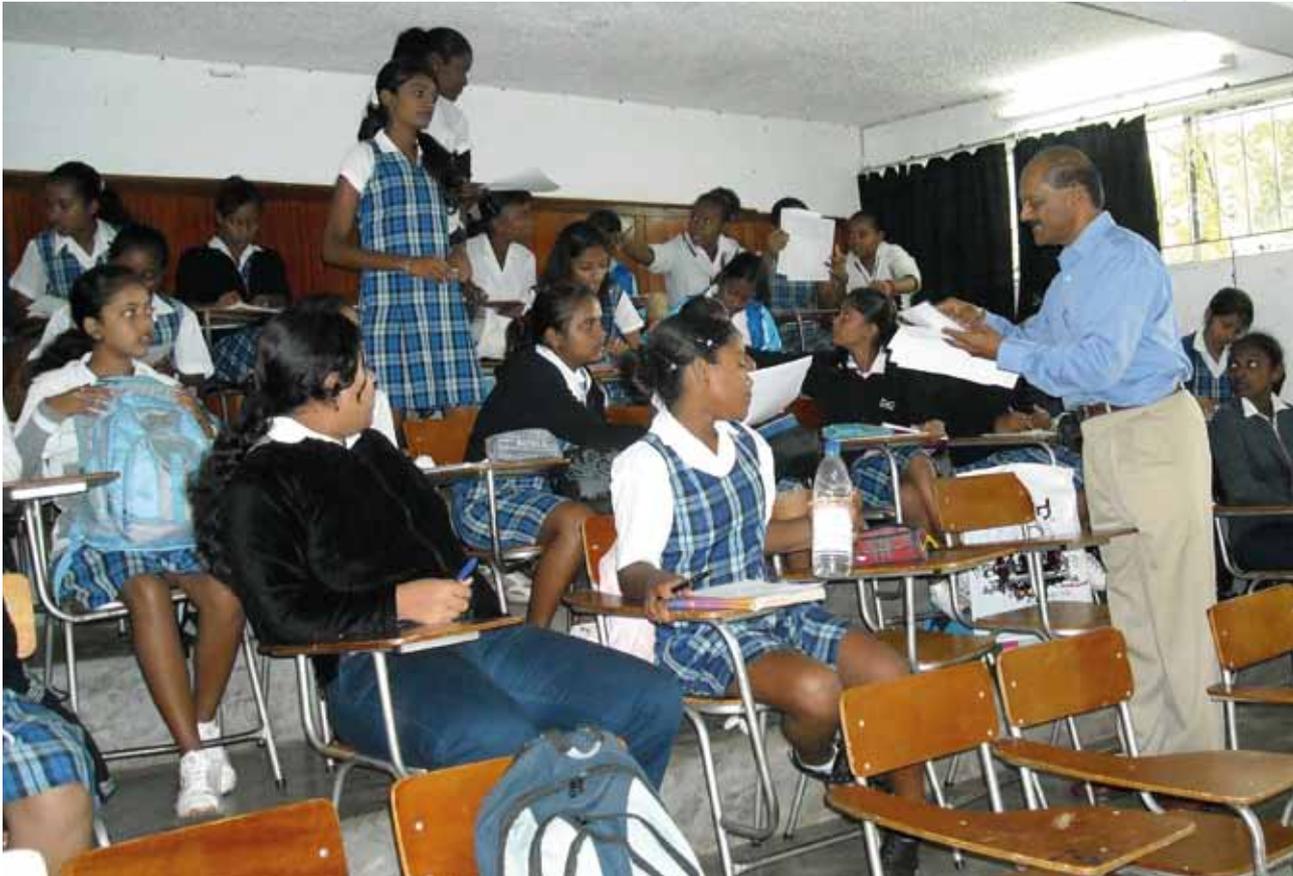
Rangers

From the Rangers' debrief information was gathered on:

- The length and duration of Le Sentier
- The most and least successful of the activities
- Ideas for new or revised activities
- The efficient management of the groups

Discussion

The launch of 'Learning with Nature' appears to have been a success. The results of the evaluation will feed into the next phase of education planning. The entire island infrastructure benefited from the launch as it served to raise standards of presentation and staff from both institutions put in a huge effort to achieve this. The Ranger team worked hard to acquire the necessary skills to manage the new trail and feedback from teachers was very positive. The appointment of Faizal Jeeroburkhan as educational consultant was pivotal in designing lesson content that both satisfied curriculum needs and met the conservation goals of MWF. His efficient liaison with the schools ensured we received the support of teachers. The conservation work of MWF was showcased and Chester Zoo evidenced a successful and productive *in-situ* partnership demonstrating that



zoo education skills can be applied in different countries and cultures as long as sensitivities are taken into account.

Conclusion

It is essential to be sensitive to the cultural nuances of education systems in different countries and working in partnership with an educator with good local knowledge minimises the risk of getting it wrong!

However, there are a range of skills that zoo educators can apply with some degree of confidence in *in-situ* situations and as far as the experience from the ‘Learning with Nature’ project is concerned those skills are listed below (Table 2).

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Table 2 Zoo educator skills that can be implemented into *in-situ* projects.

Skills	Description
Strategic planning	Defining project aims and objectives
Planning for participatory learning	Devising sustainable resources
Writing lesson plans	SMART objectives
Staff training	Presentation skills and managing groups
Interpretation	Design, writing, readability and construction
Evaluation	Monitoring and evaluation techniques

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