JAMES RENNIE BEQUEST

REPORT ON EXPEDITION/PROJECT/CONFERENCE

Expedition/Project/ Conference Title:	**Habitat and Bird survey in Thanda/Intibane for 'Space for Elephants'.**
Travel Dates:	9th June – 10th July 2010
Location:	Kruger and Thanda/Intibane, South Africa
Group member(s):	Helen Mendel
Aims:	To assess habitats in 3 reserve parks on elephant damage and impact on other organisms.

Operation Wallacea is a series of biological and social science expedition projects that operate in remote locations across the world. These expeditions are designed with specific wildlife conservation aims in mind – from identifying areas needing protection, through to implementing and assessing conservation management programmes. One of their locations is South Africa.
To recruit students Opwall representatives go round and give talks at universities in the UK and USA. I signed up for the research project 'bird and habitat survey' in South Africa
The first week for all the Opwall students in Africa doing habitat surveys or bird and habitat surveys is Bush training. This happens at Nsikazi camp in Kruger National Park. 8 of us (the ones who signed up for habitat and bird surveys) would afterwards be transferred to Intibane. Other students stayed and do habitat assessments at Nsikazi.

On the left: On the road to one of the survey sights.

The park Intibane, where I and 7 other students did the actual research, is situated in Kwazulu-Natal, an area south of Swaziland in the east of South Africa. There are several private game reserves in this area but the most important ones for us are Thanda, Intibane and Kings Land. Thanda game reserve is owned by the owner of the Sony Ericson company and is open for tourism. Intibane is more open for people wanting to do research and Kings Land is owned by the local community. All the animals in these reserves are fenced in to ensure the safety of the communities living around the reserves and to keep unwanted guests out. Last year the project 'Space for Elephants' was set up. Basically its goal is to encourage neighboring reserves like Thanda, Intibane and Kings Land to drop their fences so that the animals can roam free between the parks. In October 2009 the fence line between Thanda and Intibane was dropped. Thanda game reserve has always had elephants but Intibane didn't have any elephants until the fence with Thanda was dropped and Kings land has never had any elephants and still doesn't. It has

always been observed that elephants are very destructive animals so they also need a lot of space to roam so that they do not destroy a whole park. But how elephants actually affect different habitats within the park and the animals living in it has never been researched. The situation which arose between Thanda, Intibane and Kings Land provides the perfect opportunity to compare an area where there is considerable elephant damage (Thanda) with an area that has little elephant damage (Intibane) and also with an area that has absolutely no elephant damage (Kings Land). This is where Operation Wallacea (also called Opwall) comes in. Opwall provides researchers and volunteers (like me) to come in and do the research. Initially Opwall was going to send its volunteers to camps in Kruger to monitor the park which it has been doing for years, but this unique opportunity to gather elephant damage data was one of a kind and couldn't be passed.
So how did we collect the data? Birds are a very good indicator for change. They are the first to move in or to move out of an area because of changing circumstances. Many locations of 100 x 100 meters in the parks are put into a GPS. Each morning we would drive out to 4 locations and asses the area. We would walk to the centre of the 100 x 100 found with the help of the GPS and position ourselves in a circle facing outwards around the centre point. The first 5 minutes are called cool-down; to let the birds get used to us. In the next 10 minutes each bird that is seen is recorded.

On the left: At one of the many survey sights doing a bird survey.

After 9 am the activity of the birds drop and so any data taken too close to 9 isn't very reliable any more. In the afternoon we did habitat surveys which means that one 100 x 100 meter plot is assessed. The plot is broken down into 20 small 5x5 m squares systematically placed in a grid system which is the same for each habitat survey. In each small square we measured the grass density and grass height. We also noted down any trees in the square, what type it is, if there is any damage (elephant, fire or any other), how big it is (the width of the stems, the height of the tree and the width of its canopy). It usually took us about 2 hours for an easy habitat and 3 hours for a difficult one (denser vegetation).
We weren't the only group doing research in that area. During the whole of the summer new volunteers will come and do what we did but at different locations in the park so by the end of the summer there will hopefully be reliable data that covers all 3 parks evenly. In the future this data will hopefully be used to help with the elephant situation in other parks.

To help us to understand more about elephants and the management of nature reserves we were given a series of lectures. These lectures taught us valuable things and let us understand the problems of a nature reserve and the role of the local people living near one.
For a while elephants were the centre of attention from conservation groups which resulted in the culling ban in 1995 in South Africa. They are still being poached for their ivory but that doesn't mean their numbers are falling. In Kruger National Park there are an estimated 18,000 elephants. The estimated carrying capacity of the park, however, is around the 7-8,000 elephants. It must be said that the carrying capacity for a specific animal in a park is very hard to determine and are never

correct. Nevertheless it's pretty obvious that Kruger has too many elephants. Before man came in and started fencing in the wildlife, elephants roamed vast distances over the whole continent of Africa. They would always destroy some areas where they moved, but after a while they would move on and it would be year before they came back by which time the ecosystems have recovered. By fencing in elephants they keep on destroying the same areas over and over again which ultimately kills everything that lives there. A grown elephants only threat comes from man (a baby elephants can be vulnerable to lions and hyenas). Since 1995 the number of elephants has grown so much that this year that South Africa has had to lift its ban to manage the populations.
Other options besides culling are sterilization, relocation and contraception. But these other options each have serious downsides to them.
Sterilization seems to have the least impact on the elephants themselves. Some of the males are sterilized to reduce the birthrate. This is very expensive and not very effective in large parks with a large elephant population like Kruger.
Relocation is good because it gives a boost to the gene pool of the receiving reserve (isolation of different populations is a serious threat to the variety of the gene pool of the species), but since nearly all reserves in South Africa have an elephant problem it would only mean that the problem is brought from one place to another. Relocation is also very expensive and can be psychologically harmful for the animal moved (elephants are very intelligent and social creature (elephants are very intelligent and social creatures).

Above: spotted a female elephant with a calf. Brilliant sighting!

Contraception on females is new and currently being applied on elephants in the Pongola game reserve not so far from Intibane. They are still monitoring the affects of it on the females and there are already some indications that it is socially harming the animal and giving it psychological stress. The way it works is that a female is darted with hormones that last for two years which means the female can't get pregnant for the next two years.
When a culling is performed one herd is selected and every animal in that herd is culled, the matriarch first to prevent the animals scattering. Even the babies are killed because otherwise they suffer psychologically for the rest of their lives. It's done within minutes, every animal, one bullet to the head to minimize trauma. It sounds pretty cruel, but it seems all options have their downsides and this all of a sudden sounds a lot more humane compared to the other methods.

This trip has given me a lot of insight into conservation and research and has opened my eyes to certain subjects. Poaching for example is still a major problem, even worse than a few years ago and rhino poaching has actually become a lot worse in recent years. This news doesn't reach Europe though so most of us don't know that it's happening while public awareness could make a major difference.
Also setting up a nature reserve seems like the ideal way to preserve nature, but it isn't at all easy. Local people have to work hard to survive and most of them don't understand why an animal's life they could it is more important than feeding their family. They have tough lives and parks are trying to find ways by which the local people living around the park will also benefit from having a park by providing jobs for them or allowing them to take a certain number of animals (antelope) as food for themselves. This experience has given a lot of insight into conservation and how local people play a major role in this no matter where you are in the world.

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I would like to thank the James Rennie bequest for making this possible. It was the experience of a lifetime and I've learnt invaluable things. I hope more people get to have an experience like I had and realize how much work goes into conservation and how important it is.

On the left: Our group and the guide. Freya, our bird specialist, took the picture.