– Plenary presentation: Research –

Research in zoos - what a medium/small zoo can do

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Research in zoos has quite a long history, although in the beginning it was usually restricted to anatomy, taxonomy or simple husbandry, where individuals of various species provided a basis for description of new species or certain details of their anatomy.
Zoo research evolved continuously to become one of the obligations of modern zoological gardens. This is reflected in the EU Zoos' Directive as well as various laws at the national level. In Poland too, a new Nature Conservation Law, in a chapter devoted to zoological and botanical gardens, includes research as one of the basic requirements for a zoological garden. This requirement must be fulfilled to become an approved and licensed zoo.

When I was approached by the Chairman of the EAZA Research Committee to do a presentation during the EAZA Conference in Bristol, I felt at the beginning a bit embarrassed because I did not have the feeling that we are doing really something important here in Poznan Zoo. I also felt that our efforts in this field are not exceeding the average for EAZA zoos. Anyway, I started with identifying the baseline for our activities. Being a city-governed zoo with a greatly inadequate budget which is rigidly and tightly controlled, the environment is not especially favorable for the development of scientific research.

What we do not have in our zoo is:

- Research Department
- Research staff
- Separate and sufficient funding
- Sophisticated equipment
- Laboratories
- External funding
- Meeting room

To make things worse, we are faced with the problem of the way zoos are perceived by the scientific community in Poland. It is an established view (and unfortunately partly justified) that zoos are for providing enjoyment to unqualified visitors, only slightly better than circuses.

So the obstacles are as follows:

- Lack of funding
- Mistrust from the scientific community
- Wrong public perception
- Research is low on the priority list
- Lack of interest from the scientific community

Anyway, having all this in mind, there must be something in our zoo research activities that made us being seen by the EAZA Research Committee as a zoo really doing something in this field.

The recognition of our zoo as a potential and reliable partner in research did not come quickly and easily. Firstly, we had to establish links with the scientific community. This was done through personal contacts of our staff with researchers based at universities and other institutions. We took a pro-active role in this, proposing potential research fields for Master Degrees. All potentially interesting and feasible proposals were considered and a lot of help was provided by our staff to students. In fact our library is the richest in Poznan in terms of books on captive husbandry, behavior and conservation and had already been well used by students for many years.
Additionally we established the following principles:

- Encouraging own staff to first make notes on all possible events;

- Accepting students from secondary schools to conduct simple research;
- Providing assistance for Masters Theses and actively supporting students;
- Supporting staff to achieve higher education levels (MSc; PhD);
- Being open for any idea presented to us;
- Providing samples whenever possible and feasible to researchers;
- Using every opportunity (such as animal transfers, catching for winter quarters, or even routine cleaning procedures) to collect scientific material;

The above mentioned activities resulted in a number of quite interesting publications. To give just one example of low-cost input that can be given by the majority of zoos, I would like to describe a research on moulting patterns in birds of prey and owls. Our collection of these avian taxa is rather large. For a number of years we had encouraged our staff to collect moulted feathers and label them properly. Then we were approached by a scientist working on the determination of European birds of prey and owls on the basis of feathers. Our collection proved invaluable and provided a sound base for a unique publication in this field.

Some of the ongoing projects are: the anatomy and histology of the mammalian tongue, the genetic relation of the bat-eared fox (*Otocyon megalotis*), and reproductive patterns of white rhinos (*Ceratotherium simum*) in relation to keeping systems.

In our opinion, one of the milestones in the development of research in our zoos was undoubtedly the annual Zoobiology Summer School. Every year increasing numbers of students work at the zoo as volunteers, practitioners or making observations for their masters degrees and PhD's. As there is no place in our country where students can get formal education in the management of wild animals in captivity, a need arose to provide professional training in various aspects of zoo biology. The first summer school was held in 2003 and since then it has become an annual event which over 40 people attend every year. There have been zoo animal keepers, students and scientific university staff attending, as well as people simply interested in wild animal husbandry and zoos in general. During a six day intensive course, there are lectures as well as guided tours led by curators through the zoos. All higher staff of the zoo is involved in the training. Some of the lectures are given by invited university staff. The lecture topics are varied and cover all aspects of animal husbandry, feeding, history and development of modern zoos, conservation through captive breeding, reintroduction, record keeping, behavioral enrichment, hand-rearing techniques, genetics, international cooperation and education as well as other, more specific subjects.

The summer schools undoubtedly resulted in:

- Creation of a group of people interested deeply in zoos
- Increase in the understanding of the modern zoo activities
- Creating an interest to deepen the knowledge on zoo-related issues
- Will to do research in a zoo

The culmination of these activities was the First Conference on Research in Zoos held in the year 2004. We were actually approached by the University of Adam Mickiewicz in Poznan to help in organizing such an event. Such a conference, bringing together scientific and zoo staff had never been held in Poland before. It allowed for a free exchange of ideas, created new fields of common interest and strengthened the ties between Polish zoos and the scientific community. The introductory words by Prof. Udo Ganslosser were of special importance as they provided a background to various research fields carried out in zoos.

Building onto this stimulating experience we prepared the Second Conference, this time as an international event. Around 70 participants gathered for two days, and this time the introductory speech was held by Prof. Alastair MacDonald. His lecture gave an overview of the multitude of possibilities for doing research in zoos. We are planning to have this conference annually and to gain truly an international recognition.
All the above activities would not be possible without the engagement of our staff, be it in a curatorial or keeper position. It has to be said that most if not all of the activities are independent from the zoo's operational budget. Some of them, like the Conference and Summer School, even make a slight profit.

What are we planning for the future then?
We will certainly continue with our Summer School and the Conference, as long as the formula of both remains attractive for participants. Of course both events will evolve according to its respective participants' wishes and remarks. For the time being it is rather unlikely that we will be able to establish a research department in the zoo, so we will rather continue the cooperation with scientific institutions. Acting together we will however try to get some external funding. Additionally, we will aim at increasing the number of publications.