

# Cheetah Species Survival Plan *in situ* Conservation Programs

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The Cheetah, *Acinonyx jubatus*, Species Survival Plan (SSP) has been involved in many progressive management and conservation programs since its inception in 1985 (Grisham, 1997). The cheetah has proved to be a challenging species to continually breed in captivity. This has led to many innovative and progressive strategies for its long-term management. This paper will deal with how, while gathering baseline information on this species in a managed situation, led to an active program for supporting *in situ* conservation of this species.

## Research Population

The cheetah has been a difficult species to continually breed in a managed situation. In 1988 the Cheetah SSP declared the managed population to be a research population to gather baseline information on the cheetah (Grisham, 1989). No longer would the primary emphasis be placed upon the traditional goal of producing a self-sustaining, viable population. Rather, the SSP decided to implement and manage a systematic research program focusing upon basic reproduction, genetics, behavior, nutrition and disease. The logic was simple – the cheetah is a highly specialized species with unique genetic, reproductive, and perhaps other, as yet identified traits. Initiate research to understand the fundamental biology of the cheetah, and the key(s) to better management will be found. The program was started with no illusions – the SSP understood (and continues to believe) that it would require years of longitudinal and multidisciplinary studies to answer the obvious questions. After extensive research with eighteen zoos and hands on research on 128 cheetahs in North America, the results of the research master plan were published in a special edition of Zoo Biology (Zoo Biology, 1993). This was the first time a species had been declared a research population to gather baseline information on it.

The results of this survey raised additional questions: How do these results compare to free-ranging cheetahs? Teaming with Laurie Marker, Cheetah Conservation Fund (CCF) in Namibia, a multi-institutional team of scientist traveled to Namibia to complete similar research on free-ranging animals. Working in cooperation with CCF and the Namibian Ministry of Environment and Tourism (MET), research was completed on cheetahs comparing their reproductive soundness, diet, disease surveillance and genetics. This work was funded through support from British Airways and several North American SSP institutions (Caldwell Zoo, Columbus Zoo, Fort Worth Zoo, New Opportunities in Animal Health Science (NOAHS) Center – Smithsonian Institution, Oklahoma City Zoo, Rio Grande Zoo, White Oak Conservation Center) (Wildt, 1994). This basic research added to the data on the cheetah and built strong ties with our Namibian colleagues. In addition to research on the free-ranging population of cheetahs, a two day Wildlife Seminar in Biotechnology for Namibian veterinarians was held sharing information on what we were doing, our collective experience in cheetah management and in veterinary care. Scholarly lectures were also given at the University of Namibia and Technikon. The audience was comprised of faculty and students from the zoology and wildlife departments. In addition high school students from the Conservo Club, Otjiwarongo Secondary School and the Science Club of the German High Scholl were invited to attend and watch all aspects of our work at CCF. A key to developing a proactive conservation program is the networking and capacity building.

## Population Habitat and Viability Assessment

In 1996, in conjunction with the IUCN Conservation Breeding Specialist Group (CBSG), the IUCN Cat Specialist Group, CCF, MET, the Cheetah SSP and the Lion SSP held a joint Population Habitat and Viability Assessment (PHVA) for the Namibia Cheetah and Lion, *Panthera leo krugeri*, at the invitation of His Excellency, Dr. Sam Nujoma, President of the Republic of Namibia (Berry, 1997). The team was challenged to develop a comprehensive plan for the Namibian cheetah and lion and develop a plan that highlighted Namibia's needs. Through interaction with Namibian farmers, wildlife officials, stakeholders and scientist, a realistic plan was developed. North American Cheetah SSP zoos (White Oak Conservation Center, Columbus Zoo, NOAHS Center-Smithsonian Institution, Philadelphia Zoo, Fort Worth Zoo, Zoo Atlanta, Oklahoma City

Zoo, Rio Grande Zoo, Houston Zoo, Caldwell Zoo, Franklin Park Zoo, Binder Park Zoo, Nashville Zoo) supported this entire workshop, the cost of bringing in delegates, their lodging and food, and cost for the workshop. The SSP institutions felt very strongly that we needed to support in situ conservation programs and be able to make a difference in supporting free-ranging populations and their management. Dr. Ulie Seal, CBSG, facilitated this comprehensive PHVA and Africans chaired all working groups with a stake in the outcome. This document laid out a strategy for the management of both cheetahs and lions in Namibia. The workshop also strengthened the ties between CCF, MET, CBSG, IUCN/SSC Cat Specialist Group and the SSP and was a beginning of the development of a network of colleagues in Africa who were in need of support for their conservation work.

Lectures were arranged by CCF for the North American participants to discuss their research at local secondary schools and the University of Namibia. This was again a key to building on the earlier network of educators that was developed previously and further expands our ties with Namibians. Thus giving us the opportunity to participate in capacity building and becoming ambassadors for cheetah conservation efforts ex situ. Various North American zoos donated items for schools to assist in their conservation education programs (i.e. coloring books, pencils, pens, etc.)

### **Global Cheetah Forum**

As North American Cheetah SSP zoos looked to increase their support for cheetah conservation efforts in Africa, the SSP began looking at what projects needed support. A question raised through this process was "How do we evaluate what is the highest priority for cheetah conservation in Africa?" Working again through the CBSG and networking with CBSG/South Africa (CBSG/SA), CCF and the Cheetah SSP (Birmingham Zoo, Columbus Zoo, Fort Worth Zoo, Fossil Rim Wildlife Center, Milwaukee County Zoo, National Zoo – Smithsonian Institution, Oakhill Center for Endangered Cats, Oklahoma City Zoo, St. Louis Zoo, White Oak Conservation Center, Zoological Society of San Diego) sponsored the first ever Global Cheetah Action Plan Workshop in August 2001 in South Africa (Barthels, 2002). An extensive list of invitees was formulated by CBSG and CBSG/SA. Dr. Susie Ellis (CBSG) and Yolán Friedman (CBSG/SA and Endangered Wildlife Trust {EWT}) facilitated the workshop. A total of 53 participants from 11 countries attended and formulated the first Global Cheetah Action Plan and developed a working group called the "Global Cheetah Forum." (GCF). The goal of this workshop was to honor and unite the work that already has been carried out in the wild and in zoological institutions and to develop a conservation action plan that links initiatives, enhancing collaboration and providing for the long-term survival of cheetah in the wild. Primary issues and working groups from this workshop were: Census, Health, Management of cheetahs outside protected areas, Coordinating and collecting in situ and ex situ information, Education and Communication and Viability of the ex situ population. This group not only addressed issue concerning the long-term survival of cheetahs throughout Africa, but also created various working groups to address issue and develop individual actions plans. A Secretariat was elected to facilitate the group. Yolán Friedman was elected as the first ever Secretariat. Also, a comprehensive list of projects and funding request to make these action plans work was developed and prioritized by the GCF. This list was collated by the Cheetah SSP and is maintained by the Vice-Chair. This list was mailed to all Zoo Directors in the North American Cheetah SSP institutions asking them to consider assisting in the funding of these prioritized programs for cheetah conservation. SSP institutions have funded twelve of these projects.

The key to this whole planning process was once again that it was completely funded by SSP institutions. With limited funds throughout Africa, it was imperative that to get the proper researchers to the meeting, funding must be available. The SSP institutions stepped up to the plate and made this happen. All expenses from the workshop, transportation, lodging, food and publishing of the final documents and mailing, were paid for by the SSP institutions. The Cheetah SSP felt it was imperative that we demonstrate to the Africans that we were serious about conserving this species in nature.

In July 2002 a Global Cheetah Forum Review Workshop was held in Shumba Valley, South Africa (Barthels, 2002). The goal was to continue the momentum gathered at the first workshop and ensure that it continued moving forward with proper support. Forty-six individuals participated in the second workshop from 12 countries, including participants working on the Asiatic cheetah population. The IUCN Cat Specialist Group was a strong participant in this meeting. Programs were further defined, action plans streamlined and priority projects moved forward. The Global Cheetah Forum voted completing a census of free-ranging cheetahs the highest priority of all projects. It was strongly felt that without this basic knowledge, it would be difficult to comprehend if we were making a difference in cheetah conservation in situ. Conservation Education programs ranked high on the list and numerous programs have been instated in various range countries with assistance from North American zoos. Strong bonds were formed among the participants and a global network of cheetah researchers and conservationists was developed. The workshop once again funded in its entirety by the North American Cheetah SSP and its participating institutions (Birmingham Zoo, Cincinnati Zoo, Columbus Zoo, Fossil Rim Wildlife Center, National Zoo – Smithsonian Institution, Oklahoma City Zoo, St. Louis Zoo, Zoological Society of San Diego). The list of high priority projects again was shared with all participating institutions.

### **Global Cheetah Census Workshop**

In June 2004, an international Cheetah Census Technique Development Workshop was held on the Serengeti, Tanzania to address the concern that no accurate census of the status of wild cheetah has ever been done and there exists an increasing urgent need for good quantitative information on cheetah distribution and numbers across Africa (Daly, 2004). The Workshop was organized by EWT, CBSG/SA, and The Zoological Society of London, Tanzanian Wildlife Research Institute and sponsored by the American Zoo and Aquarium Association's (AZA) Conservation Endowment Fund (CEF), St. Louis Zoo, AZA's Cheetah SSP and the Columbus Zoo. Thirty-four participants from seven countries participated. The three day workshop included technique-based groups covered: Direct Counts: Visual Observations/Tagging; Carnivore Atlassing/Questionnaires/GIS Data; Spoor counting; Working dogs for Conservation; Camera Traps (Photographic capture-recapture) and Photographic Surveys. Workshop participants actively participated in the working groups and the results of the workshop will be documented and distributed. The primary goals of the workshop will be the development and distribution of a detailed Cheetah census technique manual to ensure that standardization and offer "best practices" guidelines for all cheetah census methodologies. The manual is under development and should be distributed to range country researchers and scientists in 2005.

### **Conserving the Species**

The Cheetah SSP has demonstrated by pooling our resources, focusing on a comprehensive plan and capacity building within range countries, SSP's can make a difference. The information first gathered by declaring a population a research population, garnering baseline data on a species led to a global network of like-minded individuals working to conserve a species. The power of the whole is greater than the individual effort. By working cooperatively globally, we can and have, made a difference.

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