

CBSG Brasil Activities

September 2012 - September 2013

CBSG Brasil was founded in 2004. CBSG Brasil is not based in any institution and is run voluntarily by its three core members with the support of the Royal Zoological Society of Scotland. Members are a wildlife biologist, a veterinarian and GIS expert each working for a different institution. The convenor - **Arnaud Desbiez** - is the Regional Coordinator for Latin America at the Royal Zoological Society of Scotland (RZSS) based in Campo Grande, Mato Grosso do Sul State, Brazil; **Fabiana Lopes Rocha** has a post-doctoral position at FioCruz, Rio de Janeiro City, Rio de Janeiro State; and **Katia Ferraz** is a professor at ESALQ, Piracicaba, São Paulo.

CBSG Brasil has strong ties with the Species Survival Commission of the IUCN. Between them Arnaud, Fabiana and Katia belong to four different Specialist Groups (Deer, Iguana, Peccary, and Wildlife Health). Arnaud Desbiez is also a member of the Species Conservation Planning Sub-Committee.

Since the 2012 CBSG Annual Meeting, we have successfully run several species conservation workshops and attended various meetings. We continue to try to be innovative in our approaches to integrating new tools and methods to the work we do. We are working alongside the IUCN SSC Species Conservation Planning Sub-Committee to further benefit from new experiences and approaches. In addition, thanks to Katia, we are adding habitat suitability modelling as a planning tool in some of our workshops.

September 2012: Spix's Macaw and Grey-breasted Parakeet PVAs

At the end of September 2012, CBSG Brasil facilitated and modelled population viability analysis (PVA) workshops for the Spix's macaw (*Cyanopsitta spixii*) and the Grey-breasted Parakeet (*Pyrrhura griseipectus*), organized by ICMbio CEMAVE.

The Spix's Macaw (*Cyanopsitta spixii*) is the only member of the parrot genus *Cyanopsitta*. It was found in Brazil in the state of Bahia. It had a very restricted natural habitat due to its dependence on the Caraibeira (*Tabebuia aurea*) tree for nesting. The Spix's macaw is extinct in the wild, but the captive population is carefully managed in several institutions throughout the world and a re-introduction program is being planned. There are approximately 85 Spix's Macaws in captivity; 77 of these are participating in an international breeding program managed by the Institute Chico Mendes of Biodiversity Conservation (ICMBio), the Natural Heritage Branch of the Brazilian Government; 60 of these are managed at Al Wabra Wildlife Preservation (AWWP), State of Qatar, where a captive breeding program is guiding Spix's Macaw a step closer to re-establishment back to its natural habitat in Brazil. The purpose of the workshop was to evaluate the captive population and its potential for re-introduction, and both PMx and Vortex were used. Recommendations for the captive populations were made, but the low egg viability and current



Spix's macaw: the last known individual in the wild

inbreeding of captive birds seriously thwarts potential viability of released birds. Many discussions took place on ways to move forward and time was spent updating the current species action plan using results from the modelling.

The grey-breasted parakeet is a recently re-discovered critically endangered species surviving in two disconnected small populations. An *in situ* conservation project was started three years ago. Vortex was used to assess status and population trends as well as major threats, research priorities and management strategies. Unless the illegal pet trade is reduced, the species will go extinct. Management strategies such as nesting boxes were recommended as well as an increase of current project activities. With proper protection and management, the species has a high chance of survival.



The workshop was a great success and helped to highlight conservation threats for both species and identified ways to move forward. Many thanks to the Fundo Vale for fully funding this workshop.

October 2012: Species Conservation Planning Strategies

In October, Arnaud Desbiez was invited by the Centro Nacional de Conservação da Flora (CNCFlora) to make a presentation on the IUCN perspective of Species Conservation Planning Strategies. CNCFlora is the IUCN SSC Brazilian Plant Red List Authority, and they are evaluating the conservation status of ALL of Brazil's flora. The next step they would like to take is to create action plans for the most endangered species of flora. Arnaud was very impressed by their work and will continue as an observer of the group, providing advice on Species Conservation Planning Strategies.

March 2013: Brown Howler Monkey Conservation Workshop

Brown howlers (*Alouatta guariba*) are one of the endemic primate species of the Atlantic Forest, ranging from the Brazilian states of Bahia and Espírito Santo in the North to Rio Grande do Sul and the Argentine Province of Misiones in the South (Kinzey 1982). In Argentina, the brown howler (*Alouatta guariba* ssp. *clamitans*) has been re-classified from “endangered” to “critically endangered” (Agostini et al. 2012) and included in the national list of the most threatened mammal species compiled by the Argentine Society for the Study of Mammals (SAREM) and by the National Authority in Fauna and Flora of Argentina. The province of Misiones has declared this species by law a Provincial Natural Monument.

From 2005-2007, Ilaria Agostini, Ingrid Holzmann, and Mario Di Bitetti, carried out a comparative study on the behavioral



The first 10 actions recommended by the participants in order of priority are:

- **Action 1.** Implement a regular surveillance system for alerting suspected Yellow Fever outbreaks in monkeys and people.
- **Action 2.** Estimate the population abundance of brown howler monkeys in Misiones.
- **Action 3.** Health studies of all brown howler monkey populations in Misiones to evaluate parameters such as physiological stress, innate and acquired immunity, hematology, etc., to be able to evaluate and compare different populations especially before and after Yellow Fever outbreaks.
- **Action 4.** Isolate Yellow Fever virus from adult and larvae of mosquitoes.
- **Action 5.** Conduct a thorough literature and archive review to enhance our understanding of the interactions (environmental and anthropogenic) involved in the maintenance and dynamics of Yellow Fever outbreaks in South America.
- **Action 6.** Capture adult mosquitoes where monkeys sleep or capture adult mosquitoes through monkey baited capture stations.
- **Action 7.** Define the current and potential distribution of brown howler monkeys in Argentina.
- **Action 8.** Attempt to isolate or detect the Yellow Fever virus in suspected vertebrate hosts using virological assays, cell cultures and molecular techniques.
- **Action 9.** Conduct a Systematic review about the virulence of the Yellow Fever virus from different strains in different vertebrate hosts in Misiones and Brazil.
- **Action 10.** Understand what defines the carrying capacity of brown howler monkeys and their habitat requirements (limiting factors, food, threats).

During the workshop, both *Vortex* and *Outbreak* were used to examine multiple scenarios and create hypotheses. The *Vortex* model demonstrated the probability of brown howler extinction depending on severity and frequency of Yellow Fever outbreaks. Most interestingly, the modeling showed that if habitat fragmentation meant that not all populations of Misiones were impacted at the same time by Yellow Fever, then fragmentation of populations could actually help increase the probability of survival of brown howlers in Misiones. The *Outbreak* model demonstrated the influence of resistant individuals, and how this may explain the cycles of the outbreaks.

When the workshop was finished, all participants gathered in a conference room in Puerto Iguazú to present results of the workshop to representatives of most governmental authorities involved in conservation in Misiones province and Argentina, as well as other NGOs, local stakeholders, some local media and anyone interested in conservation. This enabled the group to share first-hand conclusions and knowledge acquired during the workshop.

An implementation strategy for workshop actions and recommendations was agreed upon and an agenda including timeframes, focal persons and collaborators was set for every action.

April 2013: Annual meeting for the update and implementation of the Southern Paraiba River Basin Action Plan

In May 2010, a workshop to create an action plan for the Conservation of Threatened Species of Freshwater Fauna of the Southern Paraiba River Basin took place in Pirassununga, São Paulo, Brazil with the support of ICMbio and CBSG Brasil. Since then, every year the coordination team meets for a few days to monitor all aspects of the plan which include 12 goals and 60 actions. These goals are focused on protecting 19 key species of aquatic fauna, including freshwater fishes, reptiles, crustaceans and mollusks. The 3rd Annual Monitoring Workshop was held from April 1st to 4th, 2013. After three years of work the group was proud to announce that over 50% of the actions are making excellent progress. About 5% of the actions were

concluded, such as the identification of the high priority areas in the Southern Paraiba River Basin. Because of their ecological importance, these areas are the main focus and the first to have completed actions. The team identified the actions whose start or completion was delayed. These included actions in the field of environmental education and training. In 2013, these themes will be focus of the coordination team efforts and fundraising. We also decided to create a newsletter to publicize the Action Plan activities. To access the newsletter, please, visit our homepage: <http://www.icmbio.gov.br/portal/biodiversidade/fauna-brasileira/plano-de-acao/146-pan-paraiba-do-sul>. If you want to be part of the mailing list and receive inbox the fresh new information about the Southern Paraiba River Basin Action Plan, do not hesitate in contact carla.polaz@icmbio.gov.br.

June 2013: ALPZA Conference in São Paulo

Arnaud Desbiez was invited to give a presentation at the ALPZA conference, which took place at the São Paulo Zoo. He gave a presentation on how species conservation projects are an important conservation instrument for zoos using giant armadillos as an example. Several CBSG tools were discussed, and the presentation was followed by Kristin Leus, who gave more details on the importance and use of CBSG tools. As a result, Arnaud and Kristin have been asked to facilitate two meetings in 2014: one meeting for the Brazilian Society of Zoos and Aquariums, and the other for the conservation committee of ALPZA. These important workshops will hopefully help shape the future of Zoos in South America, enabling them to participate in the global zoo community.

June 2013: White-lipped peccary global assessment accepted

White-lipped peccaries are confined to the Neotropical Region, from south-eastern Mexico in the north, through Central America and northern and central South America, as far south as Entre Rios in northern Argentina and Rio Grande do Sul in southern Brazil. A global assessment for the species was conducted and submitted to the IUCN Red List authorities in 2012. In 2013, white-lipped peccaries were upgraded to Vulnerable thanks to the efforts and data from the Peccary Specialist Group.

Maned Wolf population Viability Analysis

In 2005, CBSG Brasil helped to organise and facilitate a workshop for Maned Wolves. Throughout the years, we have continued supporting our partners in their conservation decision making. Arnaud Desbiez co-authored two chapters for a book on Maned wolves using results from the PHVA and population modelling.

Chacoan Peccary Workshop

We are currently discussing with the Peccary Specialist Group on the best way to move forward for the creation of an action plan for the endangered Chacoan peccary. Alarming rates of deforestation in Paraguay have prompted the group into action, and CBSG is helping them find the best way to organise efforts. At the moment, the group is working virtually gathering data and to create a habitat suitability analysis to better understand current and potential distribution of the species in the Chaco. Katia Ferraz is leading this effort.

Although no representative from CBSG Brasil can participate in the CBSG Annual Meeting this year, please do not hesitate to contact us if you have any questions about our work.

All the best,

Arnaud Desbiez

Coordinator for Latin America, Royal Zoological Society of Scotland (RZSS)

Convenor, IUCN/SSC Conservation Breeding Specialist Group (CBSG) - Brasil Network

E-mail: adesbiez@RZSS.org.uk