

Building a Future for Wildlife

Zoos and Aquariums Committed to Biodiversity Conservation

Edited by
Gerald Dick & Markus Gusset



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Contents

List of contributors 7

Preface and acknowledgements.....9

Gerald Dick

Introduction 11

Gordon McGregor Reid

Part I Partners in biodiversity conservation

**Convention on Biological Diversity:
conservation of biodiversity through
2010 and beyond** 17

Ahmed Djoghlaif

**International Union for Conservation
of Nature: global species crisis
and conservation challenges** 21

Simon N. Stuart, Dena Cator & Jane Smart

**Convention on Migratory Species:
conservation of migratory wild animals** 25

Robert Hepworth & Aline Kühl

**Ramsar Convention on Wetlands:
committed to the conservation
and wise use of water and wetlands** 29

Tobias Salathé

Part II Zoos, aquariums and biodiversity conservation

**The world zoo and aquarium conservation
strategy: where do we go from here?** 35

Jo Gipps

**Aquariums and the conservation
of water-dependent species**..... 39

Mark Penning

**International conservation policy
and the contribution of the zoo
and aquarium community**..... 45

Manfred Niekisch

**The role of international studbooks
in conservation breeding programmes**..... 49

Thomas Althaus, Laurie Bingaman Lackey,
Fiona A. Fiskén & Dave Morgan

**Zoos and aquariums committing
to conservation** 53

Rick Barongi

**Biodiversity conservation projects
supported by the world zoo and
aquarium community** 57

Markus Gusset & Gerald Dick

Part III Biodiversity conservation projects

**The Russian “love leopard”:
a key species for zoo support** 63

Peter Sampson, Lynn Whitnall & Sarah Christie

**Reintroduction of the Virgin Islands
boa to the Puerto Rico Bank**..... 69

Peter J. Tolson, Miguel A. García & Judy J. Pierce

**Perth Zoo: living and working
in a biodiversity hotspot** 75

Helen Robertson, Pamela Smith & Daniel Scaporolo

**Chimpanzees at Pongoland in
Leipzig Zoo: ambassadors for *in situ*
conservation in West Africa**..... 81

Jörg Junhold & Christophe Boesch

**Saving one of the world’s most
endangered deer species in the Philippines
from the brink of extinction**..... 87

Jens-Ove Heckel, William L. R. Oliver,
Jean-Marc Lernoùd & Roland Wirth

**Wanted dead or alive: working with
communities to address the illegal
bushmeat trade in Cameroon** 93

Neil Maddison

**Conservation of Asian elephants in Sri Lanka:
a holistic ecological, educational and
socio-economic approach** 99

Harald M. Schwammer, Gaby V. Schwammer
& Lalith M. Seneviratne

A “life raft” for amphibians in Ecuador	105	Conservation in a snail shell: working together to save some of Polynesia’s most remarkable species	167
Luis A. Coloma, Verónica Cano & Miguel Ángel Rodríguez		Paul Pearce-Kelly, Ric Brewer, Trevor Coote, Donald McFarlane & Mary Noell	
Pathogens and parasites of Galapagos birds: a proactive approach to conservation	111	Saving snow leopards in Mongolia: one felt carpet at a time	173
Patricia G. Parker, Sharon L. Deem & R. Eric Miller		Tom McCarthy & Agvaantseren Bayarjargal	
Amphibian and reptilian diversity research, conservation and breeding projects in Vietnam	117	Golden-headed lion tamarins in focus: Project BioBrasil, a Belgian–Brazilian collaboration on biodiversity	179
Thomas Ziegler		Kristel de Vleeschouwer, Linda van Elsacker & Kristin Leus	
Coming home: the return of the Przewalski’s horse to the Mongolian Gobi	123	Tree kangaroo and biodiversity conservation in Papua New Guinea	185
Chris Walzer, Petra Kaczinsky, Oyunsaikhan Ganbataar, Namtar Enkhsaikhan & Christian Stauffer		Jim Thomas & Jean Thomas	
The return of the Alpine ibex in Tyrol: the role of Innsbruck Zoo	129	Just do it: tiger protection and conservation in Kerinci Seblat National Park, Sumatra	189
Dirk Ullrich		Debbie Martyr, Dian Risdianto & Esther Conway	
Langurs in Vietnam: rescued at the very last minute?	133	The bearded vulture: the Alpine region’s perfect flagship species	195
Bernhard Forster, Martina Vogt, Thomas Ziegler, Daniela Schrudde & Martina Raffel		Felix Weber	
The Madagascar Fauna Group: zoos working together do make a difference	139	What’s black and white and endangered all over? Together, we can conserve Grevy’s zebra in Kenya and Ethiopia	201
Ingrid Porton & Karen Freeman		Martha Fischer & Belinda Low	
Small, brown but worth the effort: recovery of the European mink in Estonia ..	145	List of WAZA conservation projects	207
Tiit Maran		Index	212
Proboscis monkeys on Borneo: who “nose” what the future holds?	151		
Biswajit Guha & John Sha Chih Mun			
Marine otters at home in Peruvian fishing ports: their behaviour, prey and interactions with human communities	157		
Jeffrey C. Mangel, Joanna Alfaro-Shigueto, Rebecca Rose & Gerald W. Borin			
Basel Zoo and Indian rhinos: how a zoo can help to secure the future of an endangered species	163		
Olivier Pagan, Friederike von Houwald, Susie Ellis, Dipankar Ghose & Amit Sharma			

Olivier Pagan
Basel Zoo

Friederike von Houwald
Basel Zoo

Susie Ellis
International
Rhino Foundation

Dipankar Ghose
WWF India

Amit Sharma
WWF India

Basel Zoo and Indian rhinos: how a zoo can help to secure the future of an endangered species

Species Indian rhinoceros (*Rhinoceros unicornis*)

Range Northern India, Nepal

Population 2,800

Threats Habitat destruction, poaching



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Distribution of Indian rhinos in Assam (© IRF). – Source file is too small.



Indian rhinos mating at Basel Zoo (© Basel Zoo).

Assam, home of the famous Indian or greater one-horned rhinoceros (*Rhinoceros unicornis*), is situated in the north-eastern corner of India and covers an area of 78,523 km². The most dominant feature of Assam is the elongated valley of the large river Brahmaputra. Most of the 25 million people living in Assam reside in this valley. Agriculture and to some extent tourism are important sources of income. The current political situation has been rather unstable with the United Liberation Front of Assam fighting for independence from India. Additionally, more than 200 ethnic groups live in Assam, giving rise to serious ethnic debates and unrest with strong impacts not only on the economy of the state but also on natural resources such as wildlife.

The Brahmaputra valley is not only home to millions of humans but also to a large number of animal species. The current number of wild Indian rhinos in India and Nepal ranges between 2,700 and 2,800. There are 2,300 to 2,370 rhinos living in India and around 400 to 430 in Nepal. The stronghold of Indian rhinos is Assam. Currently 2,048 rhinos live in Kaziranga National Park, 84 in Pobitora Wildlife Sanctuary and 64 in Orang National Park.



Entrance of Orang National Park in Assam (© Basel Zoo).

Right: Two motorised boats were purchased for patrols in and around Orang National Park. Bicycles and motorbikes were bought for the staff in Orang National Park (© NBL/WWF India).

The uneven distribution of Indian rhinos in Assam as well as constant threats such as poaching, habitat loss and human–wildlife conflicts have led to a very unstable and difficult situation for the Indian rhino. With too many animals living in one area and too few protected areas for the remaining ones, the future of the Indian rhino is facing serious problems despite former conservation successes. Several centuries ago, this species was very numerous and had a broad distribution. At the end of the 19th century, however, Indian rhinos were almost hunted to extinction. Only rigorous conservation efforts in the 20th century saved this species. Now, one hundred years later, Indian rhinos are again seriously threatened.

In 2005, the International Rhino Foundation (IRF) in collaboration with WWF India signed a long-term agreement with the Assam Forest Department called the Indian Rhino Vision 2020. The aim of this vision is to increase the total rhino population in Assam until the year 2020 from its current numbers to 3,000 and to expand their distribution to at least seven protected areas. The goal will be achieved by a combination of rhino translocations and improved protection. To meet these goals, IRF and WWF India have started to look for sponsors willing to participate in this conservation effort.



A newly constructed camp at Orang National Park (© NBL/WWF India).

The Rajiv Gandhi Orang National Park harbours the last remaining viable population of Indian rhinos on the northern bank of the river Brahmaputra. The area currently holds 64 rhinos under the jurisdiction of the Mangaldoi Wildlife Division of the Assam Forest Department and covers an area of about 78 km². Official figures for the rhino population in the park are available from 1985 onwards and it has been observed that 60 to 70 rhinos were found in the park for most estimates. The carrying capacity of the Orang National Park ranges around 90 rhinos.

Geographically, this park does not have any buffer zones and faces pressure from all sides. The southern boundary line is the Brahmaputra, posing a great challenge to fight off poachers as the waterway perforates the security network and makes the park very vulnerable. The other three sides are bordered by densely populated villages and smaller rivers. Between 2000 and 2008, 53 rhinos died. Of those, 55% resulted from poaching activities, with numbers increasing since 2006. This large number calls for the necessity to optimise measures for the protection of rhinos.

Basel Zoo has a long history of keeping and breeding Indian rhinos. The first Indian rhino arrived at Basel Zoo in 1951. In 1956, the first captive calf ever was born in Basel. Since then, almost 30 Indian rhinos have been raised. Due to successfully managing and breeding this threatened species, Basel Zoo was given the high responsibility to coordinate the European Endangered Species Programme as well as the international studbook. In 2007, Basel Zoo signed a memorandum of understanding with WWF India and IRF stating that Basel Zoo will fully support the conservation measures necessary for the protection of Indian rhinos in Orang National Park.

WWF India, IRF and the Assam Forest Department elaborated a support programme for improving protection measures in Orang National Park. (1) Communication: to improve communication, the needs identified in the park were wireless sets, vehicles, boats, motorcycles and patrolling roads. To increase mobility and to guard the open water fronts, two motorised boats were bought. In addition, motorcycles and bicycles were provided to all camps.

(2) Anti-poaching and patrolling: Orang National Park has various gaps in terms of anti-poaching camps and patrolling roads. As a first step, one camp was built and more are planned. Furthermore, grants were given to clear and maintain strategic patrolling roads as well as to provide fuel for at least 12 months. Powerful searchlights were handed out for patrols at night.

(3) Intelligence and trade control: efforts were undertaken to control poaching and to catch poachers by strengthening the intelligence network. This initiative has been undertaken with the help of TRAFFIC (the wildlife trade monitoring network, a joint programme of IUCN and WWF India). The last year already showed a first success when more than ten poachers and traders were arrested and several firearms confiscated.

(4) Staff welfare and training: to ensure proper service and sustained motivation of the frontline staff, their needs have to be taken into account. As a first step, protection clothing including rain suits and field boots were provided. Further equipment (caps, T-shirts, etc.) is on its way. In addition, staff training using firearms as well as monitoring rhinos in the field has started.

In the future, it is envisaged to further strengthen the patrols, to optimise operational methods and the overall morale. The training of scouts has already started and will continue. It is also planned that tourism will be established in this region. Visitors should not only visit the beautiful Orang National Park but should also make use of the newly built lodge nearby. This will provide more employment for locals and will show the people living next to Orang National Park that conservation can become a very important and sustainable employer of their region. Basel Zoo has "adopted" Orang National Park within the Indian Rhino Vision 2020, with the intention of supporting this project on a long-term basis.

Further partner institutions involved in the support of the Indian Rhino Vision 2020 are U.S. Fish and Wildlife Service, Zoological Society of San Diego, Cincinnati Zoo, Los Angeles Zoo, Philadelphia Zoo, Woodland Park Zoo, Fondation Ensemble, CERZA, Amersfoort Zoo, Disney Worldwide Services and the 2006 rhino campaign of the European Association of Zoos and Aquaria.



Dr **Olivier Pagan** studied veterinary medicine at the University of Berne, where he then worked at the Centre for Fish and Wildlife Health. In 1993 he joined Basel Zoo as zoo veterinarian and curator for elephants. He has been director of Basel Zoo since 2002.



Dr **Friederike von Houwald** studied veterinary medicine at the Free University of Berlin and did an M. Sc. course in wild animal health at the University of London/Zoological Society of London. She has been working at Basel Zoo as curator for birds and mammals since 2001. In 2009 she became keeper of the international studbook for Indian rhinos.



Dr **Susie Ellis** holds a BA degree in liberal studies from San Diego State University, an MA degree in comparative psychology from the University of California at Davis and a Ph. D. degree in comparative psychology from the University of California at Davis. She has been executive director of the International Rhino Foundation since 2006.



Dr **Dipankar Ghose** holds a Ph. D. degree in zoology from the University of Calcutta, achieved under a fellowship from the World Pheasant Association. He has been working for WWF India since 2005, presently heading the eastern Himalaya and Terai Arc programme.



Amit Sharma holds an M. Sc. degree in geography from Gauhati University. He is trained and experienced in conservation GIS and remote sensing. He is experienced in working at the landscape level on large mammals like elephants, rhinos and tigers. He has been working for WWF India in north-east India since 2001, presently as rhino conservation coordinator.